

Maryland Breastfeeding Resource Handbook

2005



Third Edition May 2005

Compiled by

Linda C. Pugh, PhD, RNC, Marcy L. Nelson, BS, RN,
Lee Ann Walker-Illig, BS, RN, Sarah S. Howard, BS, RN, and

Rosalynn J. Hamilton, BS

Johns Hopkins University School of Nursing
Baltimore, MD 21205

American Academy of Pediatrics



DEDICATED TO THE HEALTH OF ALL CHILDREN™

Maryland Chapter

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Dear Breastfeeding Advocate:

I am excited that a Third Edition of the Maryland Breastfeeding Resource Handbook is now available to help you assist families in obtaining the information they need about breastfeeding. I hope that you find this information useful in meeting both your clients' and your own needs.

Today, more and more Maryland mothers are choosing to initiate breastfeeding. In fact, among Maryland Women, Infants and Children (WIC) Program participants over the past 15 years, breastfeeding initiation has risen from less than 10% to more than 40% primarily by educating those involved. Families and medical personnel need to know the information to assist women to continue to breastfeed until their infants are 1 year old.

Please join health care professionals like me in continuing to work toward the Surgeon General's Healthy People 2010 that 75% of new mothers will breastfeed upon hospital discharge and 50% will continue to breastfeed their infants at six months of age. I encourage you to familiarize yourself with the resources in this book and to promote breastfeeding by helping make these resources available to families and other professionals with whom you work.

Sincerely,

Edward L. Bartlett

Edward L. Bartlett, Jr., M.D.
Maryland Chapter Breastfeeding Coordinator
American Academy of Pediatrics

PREFACE

Maryland Breastfeeding Resource Handbook Second Edition 2005

This is a guide for those who are working with pregnant women, postpartum women, and infants. It is a tool to answer such questions as:

- How can I learn more about breastfeeding?
- Where can I send a woman for breastfeeding classes?
- Where can I find a breast pump for a new mother?
- How can a mother get special help for a breastfeeding problem?
- Where can I find good books about breastfeeding?
- What is being done to promote breastfeeding?

This handbook does not claim to be complete. We have provided information to connect the reader to a broad network of breastfeeding promotion, protection, and support resources. You may reproduce any part of this document.

This handbook used the original *Philadelphia Breastfeeding Resource Handbook* (9th edition 1999) as a model. Many thanks to Nikki Lee, RN, MSN, IBCLC, ICCE and Marjorie Scharf, RD, MPH who created the original *Philadelphia Breastfeeding Resource Handbook*. Special thanks to Kay Hoover, M Ed, IBCLC for sharing the innumerable resources and her support of this project.

Many thanks go to Marcy Nelson, Lee Ann Walker-Illig, Sara Howard, and Rosalynn Hamilton, students at Johns Hopkins University School of Nursing for their time and dedication in developing this handbook. In addition, thanks go to Linda C. Pugh, Ph.D., R.N.C., Associate Professor and Director of the Baccalaureate Programs at Johns Hopkins University School of Nursing, who is the principal investigator of *Support for Low Income Breastfeeding: Cost and Outcomes*, the impetus for this project.

Send updates and corrections to:

Linda C. Pugh
Johns Hopkins University, School of Nursing
525 North Wolfe Street
Baltimore, MD 21205
Fax: 410-955-7463

Facts You Should Know About

Breastfeeding

- **Breastfeeding** is a free, clean, and easy way to feed a newborn infant. It provides a strong basis for healthy growth and development, and it helps build a special closeness between a mother and her baby.
- **Breastfeeding** can reduce an infant's development of food allergies and certain infectious diseases, including diarrhea, immunologic disorders and upper respiratory infections, as well as malocclusion (crooked teeth).
- **Breastfed** babies have a lower risk for Sudden Infant Death Syndrome (SIDS).
- **Breastfeeding** lowers the risk of developing breast cancer for both mother and daughter.
- **Breastfeeding** benefits the nation's economy. By using breastmilk, a free natural resource, approximately 375 liters of infant formula will not have to be purchased (by households or by governments) per infant every two years.
- **Breastfeeding** conserves the planet's resources. Breastmilk substitutes must be produced, packaged and transported; waste from production and packaging must be discarded.
- **Breastfeeding** is on the rise. The percentage of women breastfeeding is increasing.

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1. WIC Offices of Maryland

Allegany County
P.O. Box 1745 / 12500 Willowbrook Rd.
Cumberland, MD 21502
301-724-3750

Anne Arundel County
North County Health Services Center
791 Aquahart Rd.
Glen Burnie, MD 21061
410-222-6797

Baltimore City WIC
621 N. Eden St
Baltimore, MD 21205
410-396-9423

Baltimore County
6401 York Rd.
Baltimore, MD 21212
410-887-6003

Carroll County
290 South Center St.
Westminster, MD 21157
(410) 876-4898

Cecil County WIC
401 Bow St.
Elkton, MD 21921
410-996-5452

Frederick County WIC
350 Montevue Ln.
Frederick, MD 21702
301-694-2507

Garrett County Health Department
1025 Memorial Dr.
Oakland, MD 21550
301-334-7710

Harford County WIC
34 N. Philadelphia Blvd.
Aberdeen, MD 21001
410-273-5656

Howard County WIC
10630 Little Patuxent Pkwy.
Century 1000 4th floor
Columbia, MD 21044
410-313-7513

Johns Hopkins
111 Market Place
Baltimore, MD 21202
(410) 223-1658

Kent County
118B Lynchburg Ave.
Chestertown, MD 21620
(410) 810-0125

Lower Eastern Shore WIC
- Wicomico County:
108 East Main St.
Salisbury, MD 21801
410-749-2488
- Somerset County
7920 Crisfield Hwy.
Westover, MD 21871
410-651-5620
- Worcester County
9730 Health Way Dr.
Berlin, MD 21811
410-629-0164

Midshore WIC
- Caroline County WIC
P.O. Box 10 / 403 S. 7th St.
Denton, MD 21629
410-479-8060
1-866-551-2139

Montgomery County WIC
7676 New Hampshire Ave.
Suite 220
Takoma Park, MD. 20912
301-4397373

Prince George's County WIC
9314 Piscataway Rd.
Clinton, MD 20735
301-856-9539

Greater Baden
Walker Mill Shopping Center
1472 Addison Road South
Capital Heights, MD. 20743
301-324-2424

Queen Anne's County
206 N. Commerce Street
Centreville, MD 21617
(410) 758-0720 X319

1. WIC Offices of Maryland (continued)

Southern Maryland WIC

877-631-6182

- Charles County:

PO Box 1050 / 4545 Crain Hwy
White Plains, MD 20695

- St. Mary's County:

46935 Shangri-la
Dr.. Lexington Park, MD 20653.
Peabody St./P.O. Box 316
Leonardtown, MD 20650

- Calvert County:

975 Solomons Island Rd.
Prince Frederick, MD 20678
University of Maryland

- Edmonson Clinic

4536 Edmonson Ave.
Baltimore, MD 21229
410-328-0352

- Carey Street Clinic

1622 N. Carey St.
Baltimore, MD 21217
410-225-9835

- Penn Street Clinic

120 Penn St.
Baltimore, MD 21201
410-706-1760

Washington County WIC

140 West Franklin Street

Suite 200

240-313-3335

Hagerstown, MD. 21740

2. Breastfeeding Support Groups

African American Breastfeeding Alliance
410-225-2006
940 Madison Avenue
Baltimore, Maryland 21201
Katherine Barber
www.aabaonline.com

Allegany County WIC
301-724-3750
Barbara Metzger, Home Economist
Allegany County Health Department
P.O. Box 1745 / 12500 Willowbrook Rd.
Cumberland, MD 21502
Breastfeeding video; Q & A's every 3 months with check pickup for WIC moms; electric breast pump rentals, free for qualifying applicants; individual counseling provided.

Anne Arundel County WIC
(410) 222-6797
North County Health Services Center
791 Aquahart Road
Glen Burnie, MD 21061
Katherine Harmon, RDLN
Individual counseling; manual and electric pumps and supplemental nursing systems offered to qualifying applicants; breast shells also available.

Anne Arundel Medical Center
800-MD-NURSE
2001 Medical Pkwy.
Annapolis, MD 21401
Marian Soriano, BSN, RN, IBCLC
Warm Line 443-481-6977
Support group held the 2nd Wednesday every month from 10-11, free for all moms; inpatient individual consultation provided; onsite outpatient consultation by appointment, \$40/hour; pump sales and rentals.

Baltimore Birth Center
410-358-0635
6006 Park Heights Ave.
Baltimore, MD 21215
Free support group held for patients.

Baltimore City WIC
- Eden Street WIC
410-396-9423
621 N. Eden St.;
Baltimore, MD 21205
Rosemary Wachirra, Nutritionist
Individual counseling provided for WIC moms.

Baltimore County WIC
410-887-6003
6401 York Rd.
Baltimore, MD 21212
Laura White, RD
Local Agency Breastfeeding Coordinator
One to one peer counseling coordinated for WIC moms. Q & A's every 3 months with check pickup for WIC moms.

Breastfeeding Matters
410-349-1118
2568 A. Riva Rd. #103
Annapolis, MD 21401
Kathy Thorpe, BSN, RN, IBCLC
Consultations provided onsite for any mom; services covered by insurance or out-of-pocket; pump sales and rentals provided.

Calvert County Memorial Hospital
410-535-8283
100 Hospital Rd.
Prince Frederick, MD 20678
Holly Dooley, RN – Maternity Director
Provide postpartum inpatient support to breastfeeding moms.

Carroll County General Hospital
410-871-6161
The Women's Place;
291 Stoner Ave.
Westminster, MD 21157
Lactation Contact: Barbara Baldwin
Meet 12:00-1:30pm every Thursday, any mom welcome, free of charge, bring own lunch; children welcome providing they have quiet activities to occupy themselves.

Carroll County WIC
290 South Center Street
Westminster, MD 21157
(410) 876-4898
Lynn Piper, RN
Local Agency Breastfeeding Coordinator
One on one peer counseling coordinated; meet every 3 months with check pickup; support provided free for WIC moms. Individual counseling; manual and electric pumps provided to qualifying applicants.

Cecil County WIC
401 Bon Street
Elkton, MD. 21921
410-996-5452
Jessica Rosenberger, RD
Local Agency Breastfeeding Coordinator
One on one peer counseling coordinated; meet every 3 months with check pickup; support provided free for WIC moms. Individual counseling; manual and electric pumps provided to qualifying applicants.

2. Breastfeeding Support Groups (continued):

Johns Hopkins Hospital
Warm Line 410-502-5471
CMSC 144; 600 N. Wolfe St.
Baltimore, MD 21287
Judy Vogelhut, MSN, RN, IBCLC
410-502-5471
Individual counseling, free to all moms; Postpartum consultation at the Harriet Lane Clinic – insurance coverage or self-pay.

Johns Hopkins University WIC
111 Market Place
Baltimore, MD 21202
(410) 223-1658
410-223-1687
Kathy Tremper, BA, CCE
Lactation Specialist
Individual counseling; telephone support; electric and manual pumps to qualifying applicants; breastfeeding accessories also available. One-on-one counseling coordinated for WIC moms.

Lactation on Location
301-774-7279
P.O. Box 1384
Olney, MD 20830
Colleen Prorok, RN, MSN, IBCLC
(Montgomery County)
Home and office visitations, \$85/hour, travel fees applied as necessary; follow-up telephone support provided to clients; breast pump sales and rentals available.

Lower Eastern Shore WIC
Wicomico, Worcester, and Somerset County
MaryAnn Maddee, RD, IBCLC - 410-749-2488
108 East Main St.
Salisbury, MD 21801
Classes offered in Worcester and Wicomico; individual counseling; manual and electric pumps on loan; breast shells, breast pads;
- Somerset County
7920 Crisfield Hwy.
Westover, MD 21871
Marilyn Beste, RN 410-651-5620
- Worcester County
9730 Health Way Dr.
Berlin, MD 21811
Debora Farlow, RN 410-629-0164.

Maryland General Hospital
827 Linden Ave.
Baltimore, MD 21201
410-225-8135 (LM 4/16 (2))
Lynne Dvorak, RN, CPCE
Assistant Clinical Manager and Childbirth Educator
3 lactation support persons available; provide support inpatient postpartum; mothers seen in office as needed, free for all moms; provide telephone follow up with breastfeeding mom, free of charge.

Memorial Hospital in Easton
410-822-1000 X 5700
219 S. Washington St.
Easton, MD 21601
Carol Moore, BSN, RN, IBCLC
Seven lactation consultants on maternity staff providing individual counseling; phone support and follow up with breastfeeding mothers; onsite consultation provided; supplies provided for patients.

Midshore WIC
410-479-8060 or 1-866-551-2139
403 S. Seventh Street
Denton, MD. 21629
One-on-one counseling coordinated for WIC moms.

Montgomery County WIC
301-439-7373 X108
7676 New Hampshire Ave. Suite 220
Takoma Park, MD. 20912
Maria Carunungan, RD, LD
Education/Breastfeeding Coordinator
Peer counselors available on site; Individual counseling; manual and automatic pumps provided to qualifying applicants; services provided free for WIC moms.

2. Breastfeeding Support Groups (continued):

Nurturing Necessities
1430 Solomons Island Rd. / P.O. Box 997
Huntingtown, MD 20639
410-414-5414
Debbie Ellis, RN, CPCE, IBCLC
Breast pump rentals and sales; breastfeeding bras professionally fitted; pump replacement parts; other breastfeeding accessories; individual telephone counseling; onsite consultation provided \$40/hour; home visits provided as needed, fees scheduled with Ms. Ellis.

Peninsula Regional Medical Center
Help Line 410-543-7199
100 East Carroll St.
Salisbury, MD 21801
Ellen Pinker
410-219-2472; Outpatient consultation provided free of charge.

Prince George's County WIC
301-856-9539
Jane Ghaffari, RD, LN, IBCLC
Local Agency Breastfeeding Coordinator
9314 Piscataway Rd.
Clinton, MD 20735
Breastfeeding showers for pregnant and new moms to learn about breastfeeding.

Upper Shore WIC
Christine Fisher, RD, Program Coordinator
- Queen Anne's County WIC
206 N. Commerce Street
Centreville, MD 21617
(410) 758-0720 X 319
- Kent County WIC
118B Lynchburg Avenue
Chestertown, MD 21620
(410) 810-0125
Individual counseling; manual and electric pumps provided qualifications.

St. Agnes Health Care
Warm Line 410-368-2624
900 Caton Ave.
Baltimore, MD 21229-5299
Patty Bascietto, RN, IBCLC
Antepartum breast assessment \$35.00; Education classes through Women's Health Education Center 410-368-2810; Postpartum Visits at clinic - 35.00 for non-patients 35 for patients; Drop in every Tuesday 11-12 for assessment 410-368-2636; Time out for new mothers bimonthly topics including various parenting, lunch provided, free for all moms

St. Joseph's Medical Center
Marian Malinski, RN, CPCE 410-337-1682
7601 Osler Dr.
Towson, MD 21204
Warm Line 410-337-3994 staffed by four IBCLCs; support group free every Thursday at 1:00pm; outpatient mothers seen free for the first 15 minutes, then \$60.00/hour of service.

Sinai Hospital
Warm Line 410-601-5193
Department of Women's and Children's Services
2401 W. Belvedere Ave.
Baltimore, MD 21215
Individual counseling and onsite consultation provided free for all patient; Lactation services provided by Mary Ralph, RN, IBCLC, Gay Baerzi, RN, IBCLC, Jan Goedeke, RN, IBCLC.

Shady Grove Adventist Hospital
Lactation 301-279-6667
1801 Research Blvd. #101
Rockville, MD 20850
Sandy Resnick, RN, IBCLC
Jeannine Ladd, RN, IBCLC
Support group "Best" program held every Wednesday 2-3:30pm; free for all moms, must register; inpatient lactation support; outpatient lactation services onsite and home programs – \$80 for first hour onsite and \$100 for first hour with home visit and \$20 for each additional ¼ hour at either location; breast pump rentals and sales and other breastfeeding supplies sold on location.

Southern Maryland WIC
877-631-6182
Charles County:
PO Box 1050 / 4545 Crain Hwy
White Plains, MD 20695

St. Mary's County:
46935 Shangri-la Dr.
Lexington Park, MD 20653.
Peabody St./P.O. Box 316
Leonardtown, MD 20650

Calvert County:
975 Solomons Island Rd.
Prince Frederick, MD 20678.
Louise Rogers, RN 410-535-5400
Breastfeeding Coordinator
Individual counseling; manual and automatic pumps provided to qualifying applicants; all services provided free to WIC moms.

2. Breastfeeding Support Groups (continued):

Union Memorial Hospital
201 E. University Pkwy.
Baltimore, MD 21218
410-554-2218
Susan Atlas, RN, IBCLC
Support groups Wednesdays 10:30am-12pm
free for all moms; Individual inpatient
consultation after delivery; telephone support
provided postpartum; onsite consultation
provided free for patients; some accessories
supplied as needed.

University of Maryland, WIC
410-328-0352
4536 Edmondson Ave.
Baltimore, MD. 21229
Charlene Taylor
Breastfeeding Coordinator
Provide individual counseling; support group
held every 4th Monday of the month at 2:00;
provide manual and electric pumps to qualifying
applicants; services provided free for WIC
moms.

Upper Chesapeake Medical Center
Lactation 443-643-2949
500 Upper Chesapeake Dr.
BelAir, MD 21014
Tune-up support group for postpartum mothers
for one month after delivery, every Tuesday at
10am. Breastfeeding support group every
Thursday 11am-1pm. LaLeche meetings also
held every 2nd Monday at 7pm, call Christine at
410-569-4223. All services free, for all mothers.

Washington County WIC
240-313-3335
140 West Franklin Street
Hagerstown, MD. 21740
Arleen Shuster, RD
Breastfeeding Consultant
Manual and electric pumps provided to
qualifying applicants; Connect mothers to La
Leche League; Cards provided to mothers with
access numbers for help after hours; individual
counseling and postpartum follow-up provided;
books provided on loan; list of classes provided;
all these provided to WIC moms for free.

Washington County Hospital
Warm Line 301-790-8530; 301-7908214
251 E. Antietam St.
Hagerstown, MD 21740
Lisa Ambrose, RN, IBCLC
Individual inpatient consultation; telephone follow- up
postpartum; consultation provided on site, \$25 for ½
hour and \$50 for longer; postpartum families admitted for
reasons other than delivery are also seen by lactation
per practitioner order; support group held 2nd Friday of
each month from 1:00-2:30pm in the Pangborn Building,
room 124 free for all moms; Pump rentals and sales
available as well as other miscellaneous supplies.

Washington County- LaLeche League
Presbyterian Church of Hagerstown
Third Thursday each month
9:30-10:30 am (free)
for more information, call Michelle at 301-790-1213

Western Maryland Health Systems
Memorial Hospital Campus
600 Memorial Ave.
Cumberland, MD 21502
301-723-4184/4186
Barbara Hedrick, RN, IBCLC and Heidi Quinn, RN
IBCLC; Onsite postpartum visitation free for all moms;
postpartum telephone support; breastfeeding task force,
all community members welcome, call to register;
postpartum support group held 1st and 3rd Tuesday of
each month from 12:30-2:30pm, free for all moms.

Susan Weyer, RN, ICCE, IBCLC
Private Practice Lactation Consultant
410-531-6235
14038 Howard Rd.
Dayton, MD 21036
<http://hometown.aol.com/weyergang/myhomepage/>
[business.html](#)
Home visitation for \$75/visit; rent pumps; breastfeeding
education offered with childbirth 4 week series held in
Clarksville 7-9pm on weeknights, \$90/couple for series.

3. Breastfeeding Classes

Arnold MD Special Beginnings Birth and Women's Center
410-626-8982
1454 Baltimore-Annapolis Blvd.
Arnold, MD 21012
Class offered free every other month.

Anne Arundel Medical Center
800-MD-NURSE
2002 Medical Pkwy.
Annapolis, MD 21401
Warm Line 443-481-6977
Class offered five times monthly; daytime hours 10-12; evening hours 7-9; cost is \$15.

Breastfeeding Matters
410-349-1118
2568 A. Riva Rd. #103
Annapolis, MD 21401
Kathy Thorpe, BSN, RN, IBCLC
Classes held 1st Monday every month for \$25/couple from 7-9:15pm.

Carroll County General Hospital
410-871-6161
The Women's Place;
291 Stoner Ave.
Westminster, MD 21157
Lactation Contact: Barbara Baldwin
Class provided two Tuesdays a month from 7-9:30pm - \$30.

Childbirth Education ASPO of Metropolitan Baltimore
410-465-9550
Information line about classes offered in various areas.

Franklin Square Hospital Center
Health Education 443-777-7657
Gretchen Chapman
9000 Franklin Square Dr.
Baltimore, MD 21237
Register for breastfeeding classes at:
1-888-74-OBTLC
Lactation resource center 443-777-7427
Return to work/school video, bed-rest breastfeeding video; classes offered three times monthly weekday 7-9:30pm, \$25.

Frederick County WIC
301-694-2507
350 Montevue Ln.
Frederick, MD 21702
Tracey Miller
Local Agency Breastfeeding Coordinator
Breastfeeding education program and breastfeeding showers for pregnant and new moms to learn about breastfeeding; services provided to WIC moms.

Garrett County Health Department
301-334-7710
1025 Memorial Dr.
Oakland, MD 21550
Garrett County WIC and Improved Pregnancy Outcomes.
Carol Bass, IBCLC
Breastfeeding class included in childbirth classes; provided free to all moms.

Garrett County Memorial Hospital
Family Centered Maternity Suite
251 N. Forth St.
Oakland, MD 21550
301-533-4233 Parents Hotline
Charlene Bennett, RN
Class held 2nd Tuesday of every month free for all moms.

Greater Baltimore Medical Center
Warm Line 443-849-3428
6701 N. Charles St.
Baltimore, MD 21204
Classes held three times a month on Mondays and Wednesdays at 7pm call 443-849-2408 to register.

Holy Cross Hospital
Warm Line 301-754-7745 staffed by 13 LCs
9805 Dameron Dr.
Silver Spring, MD 20902
Janet Montrie, RN, IBCLC
Classes held twice a month, 3 hours duration, \$30 per couple; register (301) 754-8800.

Howard County General Hospital
410-740-7600
5755 Cedar Ln.
Columbia, MD 21044
One class offered per month; cost \$20/mom and \$35 with partner; register 410-740-7601.

Johns Hopkins Hospital
Warm Line 410-502-5471
CMSC 144; 600 N. Wolfe St.
Baltimore, MD 21287
Judy Vogelhut, MSN, RN, IBCLC
410-502-5471
Classes held 3rd Wednesday of the month 7-8:30pm; \$15 per class.

3. Breastfeeding Classes (continued):

Maryland General Hospital
827 Linden Ave.
Baltimore, MD 21201
410-225-8135 (LM 4/16 (2))
Lynne Dvorak, RN, CPCE
Assistant Clinical Manager and Childbirth
Educator
Classes held every other month on Saturdays
from 10am-6:30pm, breastfeeding including in
childbirth series, free for all moms;

Maternity Center in Bethesda
301-530-3300
6506 Bells Mill Rd.
Bethesda, MD 20817
Diana Taylor, CNM; Suzette Dummett
Class held once a month for \$40/couple and 35
for client.

Memorial Hospital in Easton
410-822-1000 X 5700
219 S. Washington St.
Easton, MD 21601
Carol Moore, BSN, RN, IBCLC
Classes held once every other month in the
evening, free for all moms.

Midshore WIC
Nancy Dimond, RD, CLE or Cindy Harding, RN
Local Agency Breastfeeding Coordinator
- Caroline County WIC 410-479-8060
P.O. Box 10 / 403 S. 7th St.
Denton, MD 21629
- Dorchester County 1-866-551-2139
503 D. Muir St. Sasset Macgee Center
Cambridge, MD 21613
- Talbot County 866-551-2139
126 Port St. Family Services Center
Easton, MD 21601

Breastfeeding classes held twice a month in each
county. Will take non-WIC moms if space
available. Please call for more information.

Montgomery County WIC
301-439-7373 X108
7676 New Hampshire Ave. Suite 220
Takoma Park, MD. 20912
Maria Carunungan, RD, LD
Education/Breastfeeding Coordinator
Classes held 4 times a year on site.

Nurturing Necessities
1430 Solomons Island Rd. / P.O. Box 997
Huntingtown, MD 20639
410-414-5414
Debbie Ellis, RN, CPCE, IBCLC
Basics and pumping classes each held once
monthly, \$25/couple.

Peninsula Regional Medical Center
Help Line 410-543-7199
100 East Carroll St.
Salisbury, MD 21801
Ellen Pinker
410-219-2472. Classes held every 3rd Thursday
of the month for \$20.00.

Prince George's County WIC
302-856-9539
Jane Ghaffari, RD, LN, IBCLC
Local Agency Breastfeeding Coordinator
9314 Piscataway Rd.
Clinton, MD 20735
Breastfeeding showers for pregnant and new
moms to learn about breastfeeding.

St. Agnes Health Care
Women's Health Education Center
410-368-2810
Warm Line 410-368-2624
900 Caton Ave.
Baltimore, MD 21229-5299
Patty Bascietto, RN, IBCLC
Antepartum breast assessment \$35.00; Basics
class held one Sunday a month, 7-9pm, for
\$25/couple; following Sunday Advanced class is
held 7-9pm, for \$25/couple or \$45 when both
classes are taken.

St. Joseph's Medical Center
Marian Malinski, RN, CPCE
410-337-1682
7601 Osler Dr.
Towson, MD 21204
Warm Line 410-337-3994
Class held 2nd Saturday 1-3:30 pm for \$20/couple
and \$60 when taken with the Childbirth Series.

St. Mary's Hospital
301-475-6 019
Shady Grove Adventist Hospital
Lactation 301-279-6667
1801 Research Blvd. #101
Rockville, MD 20850
Sandy Resnick, RN, IBCLC
Jeannine Ladd, RN, IBCLC
Classes held one Monday a month from 7:00-
9:30pm, one Saturday a month from 9-11:30am,
and 3-4 Sundays a month from 4-6:30pm taught
by LC; must register; Free with childbirth class -
\$30 if taken alone.

3. Breastfeeding Classes (continued):

Sinai Hospital
Warm Line 410-601-5193
Department of Women's and Children's Services
2401 W. Belvedere Ave.
Baltimore, MD 21215
Lactation services provided by Mary Ralph, RN, IBCLC, Gay Baerzi, RN, IBCLC, Jan Goedeke.
Basics class held every 2nd Tuesday of the month
7-9pm, free to all moms.

Union Memorial Hospital
410-554-2403
201 E. University Pkwy.
Baltimore, MD 21218
Basics class is held every 6 weeks on Monday evenings from 7-9:30pm - \$20 alone and \$15 when taken with childbirth education series. A back to work/school class is provided upon request.

Washington County Hospital
Warm Line 301-790-8530; 301-790-8214
251 E. Antietam St.
Hagerstown, MD 21740
Lisa Ambrose, RN, IBCLC
Class held 2nd Monday of each month, from 6:00pm-8:30pm \$15.

Washington County:
North End Lactation Services, Inc.
622 Potomac Ave.
301-416-7272
Hagerstown, MD. 21740
Going back to work class, third Sunday of each month, 2-4pm. Free. Must RSVP.

Western Maryland Health Systems
Memorial Hospital Campus
600 Memorial Ave.
Cumberland, Maryland 21502
301-723-4184/4186
Barbara Hedrick, RN, IBCLC and Heidi Quinn, RN IBCLC; classes offered 2nd Tuesday of every month 6-9pm; free for all moms.

4. Breastfeeding Contacts

State:

Amy Kovar Resnik, MS, RD, CSP, Breastfeeding Promotion Coordinator
Office of the Maryland WIC Program - 410-767-6902, or 1-800-242-4942

Mary Johnson, Coordinator of Special Programs
Maryland Breastfeeding Promotion Task Force
Center for Maternal and Child Health- 410-767-5581

Allegany County:

- Western Maryland Health Systems, Memorial Hospital Campus; Barbara Hedrick, RN, IBCLC 301-723-4184

Anne Arundel County:

- Anne Arundel Medical Center Breastfeeding Warm Line; 410-481-6977
- Susan Dodge, IBCLC, Gambrills; 301-261-3440 (LM 4/30)
 - Jane Ghaffari, RD, LN, IBCLC; 410-280-3216
- Kim Knight, Private IBCLC, Arnold; 410-533-5343(LM 4/30)
- Kathy Thorpe, BSN, RN, IBCLC, Arnold; 410-349-1118, beeper 410-432-3015
- Carlita Unger, RN, IBCLC; 410-255-6690
- Special Beginnings Birth and Women's Center, 410-626-8982

Baltimore City:

- Johns Hopkins Hospital—Judy Vogelhut, RN, CPNP, IBCLC; 410-502-5471
- Maryland General Hospital—Lynne Dvorak RN, CPCE; 410-225-8135
- St. Agnes Healthcare, Patty Bascietto RN, IBCLC, Breastfeeding Warm Line; 410-368-2624
- Sinai Hospital- Breastfeeding Warm Line 410-601-5193
- Union Memorial Hospital—Susan Atlas, RN, IBCLC; 410-554-2218
- Judy Yankelove, LaLeche League Leader, Medela Representative; 410-653-2023

Baltimore County:

- Franklin Square Hospital, Lactation Resource Center—443-777-7427
- Greater Baltimore Medical Center, Breastfeeding Warm Line; 410-828-3428, Marla Newmark, BSN, RN, IBCLC – 443-849-3428
- St. Joseph Hospital, Breastfeeding Warm Line; 410-337-3994

Calvert County:

- Calvert County Memorial Hospital – Holly Dooley, RN; 410-535-8283
- Nurturing Necessities, Debbie Ellis, RN, CPCE, IBCLC – 410-414-5414
- Dee Garris, RN, IBCLC 301-855-5187

Carroll County:

- Carroll County General Hospital—Barbara Baldwin, RN, IBCLC; 410-871-6161

Charles County:

- Becky Butler, IBCLC

Garrett County:

- Healthy Families, Debbie Durban, RN, IBCLC, 301-334-7720
- Healthy Families, Yvonne McConnell, RN, IBCLC, 301-334-7720
- Healthy Families, Debbie Friend, RN, IBCLC, 301-334-7720
- Healthy Families, Becky Friend IBCLC, 301-334-7720
- Improved Pregnancy Outcomes, Carol Bass, IBCLC – 301-334-7711
- WIC –Caroline Evans, RN. 301-334-7716

Harford County:

- Upper Chesapeake Medical Center 443-643-2949

4. Breastfeeding Contacts (continued)

Howard County:

- Howard County General Hospital Rebecca Nocodemus RN, IBCLC, 410-740-7830
- Lactation Center, Barbara Heiser, IBCLC, Ellicott City; 410-995-3726
- Susan Weyer, RN, ICCE, IBCLC, Private Practice Lactation Consultant – 410-531-6235

Montgomery County:

- Holy Cross Hospital, Janet Montrie, RN, IBCLC – 301-754-7745
- Lactation on Location, Colleen Prorock, RN, MSN, IBCLC – 301-774-7279
- Maternity Center in Bethesda, Diane Taylor, CNM – 301-530-3300
- Shady Grove Adventist Hospital, Sandy Resnick RN, IBCLC – 301-279-6667

St. Mary's County:

- Lori Warrell, IBCLC 301-997-6505

Talbot County:

- Memorial Hospital in Easton, Carol Moore, BSN, RN, IBCLC – 410-822-1000 X 5700

Washington County:

- *Joan Lopez, LaLeche League Consultant; 301-824-7267*
- Washington County Hospital, Lisa Ambrose, RN, IBCLC – 301-790-8530

Wicomico County:

Breastfeeding Hotline at Peninsula Regional Medical Center; Ellen Pinker, 410-219-2472.

* for additional breastfeeding resource persons, please contact your local WIC agency (see page 6).

5. Breastfeeding Equipment Companies

Avent
475 Supreme Dr.
Bensonville, IL 60106
800-54-AVENT (542-8368)
<http://www.aventamerica.com>
Representatives for Pennsylvania, Maryland, and Delaware region:
Clark Spain, Pennsylvania 610-286-6701

Hollister/Ameda/Egnell
2000 Hollister Drive
Libertyville, IL 60048
800-323-8750
<http://www.ameda.com>
Representatives for Maryland:
Jamie Palla 800-624-5369 ext. 1031
Jeffrey Sacks 800-624-5369 ext. 1403

Medela, Inc.
1101 Corporate Drive
McHenry, IL 60050
800-435-8316
<http://www.medela.com>
Representatives for Maryland:
Sharon Swineburn 800-435-8316 ext.569
Cristy Zacchero 800-435-8316 ext. 516
Debbie Kressler 800-435-8316 ext. 567

6. Paying for Breast Pumps

Maryland Medical Assistance will cover the cost of a breast pump if the baby has a prolonged hospital stay and if the mother wants to breastfeed her baby and cannot afford a pump.

WIC may have breast pumps available for WIC participants.

Call the Pregnant Women & Children's Program (part of the Maryland Department of Health and Mental Hygiene) at 1-800-456-8900 for more information.

7. Milk Banks

The Mothers' Milk Bank
Christiana Care Health System
Christiana Hospital
4755 Ogletown/Stanton Road
<http://www.hmbana.org>
P.O. Box 6001
Newark, DE 19718
(302) 733-2340

Mother's Milk Bank
Valley Medical Center
751 South Bascom
San Jose, CA 95128
(408) 998-4550

Mother's Milk Bank at Austin
900 East 30th Street, Suite 101
Austin, TX 78705
(512) 494-0800
Info@mmbaustin.org
<http://www.mmbaustin.org>

Triangle Lactation Center and Mother's Milk Bank
Wake Medical Center
3000 New Bern Avenue
Raleigh, NC 27610
(919) 350-8599

Mothers' Milk Bank
Presbyterian/ St. Luke's Medical Center
1719 East 19th Avenue
Denver, CO 80218
(303) 869-1888

Mothers Milk Bank of Iowa
Division of Nutrition, Department of Pediatrics
Children's Hospital of Iowa
University of Iowa Hospitals and Clinics
Iowa City, IA 52242
(877) 891-5347
(319) 353-7598 (fax)
<http://www.uihealthcare.com/milkbank>

Mothers' Milk Bank
Children's and Women's Lactation Services
British Columbia Children's and
Women's Hospital
Frances Jones IBCLC, Coordinator
4480 Oak Street
Vancouver, BC
V6H 3V4 Canada
(604)-875-2282

Banco de Leche
Dr. Rafael Lucio Avenue
Adolfo Ruiz Cortines #2903
C.P. 91020
Xalapa, Veracruz, Mexico
Edith Nava Bustos, Coordinator
52-55-14-45-00

8. Breast Pump Sales in Baltimore City and Surrounding Areas

A & B Drugs
410-685-1948
Baltimore, MD
Sells Ross manual pumps

Anchor Pharmacy:
410-848-8900
Store #109
801 Park Avenue
Baltimore, MD 21201

Store #111
205 Washington Heights, Medical Center
Westminster, MD 21157

Annapolis Lactation Resources
Severna Park, MD 21146
(410) 544-5235

Austin's Pharmacy
6729 York Rd
Baltimore, MD
410-377-5300
Can order breast pumps, but does not stock

Baby's First
Landover, MD 20784
(301) 343-2601

Best Price Pumps
8182 Weyburn Road
Millersville, MD 21108
(410) 987-7756

Breast Pumps After Hours
11927 Gold Needle Way
Columbia, MD 21044
(410) 740-0712

Broadway Pharmacy Inc.
410-563-2500
Baltimore, MD
Sells manual breast pumps

Burlington Coat Factory:
Annapolis, MD 21401
(410) 571-6818

1955 East Joppa Road
Baltimore, MD 21234
(410) 665-1390

3200 Donnell Drive
Forestville, MD 20747
(301) 736-6685

Burlington Coat Factory (Cont'd):
1025 West Patrick Street
Fredrick, MD 21702
(301) 698-0003

600 North Fredrick Avenue
Gaithersburg, MD 21702
(301) 527-1461

6200 Greenbelt Road
Greenbelt, MD 20770
(301) 982-2386

118 Shawan Road
Hunt Valley, MD 21031
(410) 584-7406

8661 Collesville Road
Silver Spring, MD 20910
(301) 589-3610

3286 Crane Highway
Waldorf, MD 20784
(301) 645-6226

Chandlers Drugs & Medical
7037 Annapolis Road
Landover Hills, MD 20784
(301) 577-9000

Cheryl Harrow, RNC
Baltimore, MD 21206
(410) 665-8373

Childbirth Education ASPO Lamaze of Metropolitan
Baltimore
410-465-0042 or 410-461-8416
Ellicott City, MD
Sales and rents Medela line

City Pharmacy
723 Bridge Street
Elkton, MD 21921
(410) 398-4383

Colleen Prorok
Brookeville, MD 20833
(301) 774-7279

CVS Pharmacies (Sells Even-Flow Press-in-
pump electric, and Avent Natural-manual):
1814-1820 Earhart Road
410-687-3319
Baltimore, MD

8. Breast Pump Sales in Baltimore City and Surrounding Areas (Continued)

CVS Pharmacies (continued) 1235 E. Monument Street 410-327-8864 Baltimore, MD	Fredrick Memorial Hospital Fredrick, MD 21701 (301) 698-3880
Falls Road Baltimore, MD 410-662-1672	Great Beginnings Furniture Gaithersburg, MD 20879 (301) 417-9702
5407 Harford Road 410-426-9857 Baltimore, MD	Honey Suckle, INC. Kensington, MD 20895 (301) 946-0167
5407 Harford Road 410-235-5892 Hamilton, MD	Jennifer Rowan Cumberland, MD 21502 (301) 729-1338
5200 York Road 410-433-7710 Baltimore, MD	Jill Martinez Silver Springs, MD 20901 (301) 585-9282
8302 Liberty Road 410-496-7842 Baltimore, MD	Johns Hopkins Hospital 410-502-5471 Judy Vogelhut; Sells breast pumps
11623 Reisterstown Road 410-526-3509 Reisterstown, MD	Johns Hopkins Pharmaquip Baltimore, MD 21224 (410) 663-4408
1000 Taylor Avenue 410-828-0708 Baltimore, MD	Judith Yankelove Baltimore, MD 21204 (410) 653-2023 Rents and Sells Ameda and Medela Brands
2560 West Franklin Street 410-362-8203 Baltimore, MD	Kaycee Drugs & Medical District Heights, MD 20747 (301) 735-7700
Edwards & Anthony Pharmacy & Medical Supplies 410-668-7066 Baltimore, MD; Sells electrical pumps	Kmart Stores 410-521-3900 8725 Liberty Road, Baltimore, MD Sells manual and electric pumps
Equipped For Life Hagerstown, MD 21742 (301) 714-0200	The Lactation Center Ellicott City, MD 21042 (410) 995-3726
Express Yourself: Breast Pump Center Forest Hill, MD 21050 (410) 838-1988	Laurel Lactation Resources Laurel, MD 20708 (301) 498-4437
Expressly Yours Baltimore, MD 21225 (410) 354-3268	Lykos Pharmacy 410-252-4225 Sells manual pumps: Lansinoh
Fallston Pharmacy Fallston, MD 21047 (410) 879-9000	

8. Breast Pump Sales in Baltimore City and Surrounding Areas (continued):

Medstar Health
Elkridge, MD 21075
(410) 540-4400

Milky Way
La Plata, MD 21075
(301) 609- 8579

Mommies Milk
Baltimore, MD 21234
(410) 663-4408

Neighborcare Home of MD
Annapolis Junction, MD 20701
(301) 362-7700

Northern Pharmacy and Medical Equipment
410-254-2055
Located at Northern Pkwy and Harford Road
Sells breast pumps; if they do not have the pump
you want, they can order it

Northern Rexall Pharmacy
Baltimore, MD 21234
(410) 254-2055

Nurturing Necessities
Hungtingtown, MD 20639
(410) 414-5414

Parent Connection
Greater Baltimore Medical Center
443-849-6262
6701 N. Charles Street
Baltimore, MD 21204
Sell Medela Line brands

Patsie Griffin
Pasadena, MD 21122
(410) 437-3635

Purdum Pharmacy
410-377-5600
Baltimore, MD
Can order manual and electric pumps, shipment in
next day

Rexall Pharmacy
410-876-2081
99 West Main Street
Westminster, MD
Sells Lansinoh Easy Express Breast Pump, manual

Rite-Aid Pharmacies (Sells electric pumps: Even-
flow, unless otherwise noted):

Alameda Shopping Center
410-435-5740
Baltimore, MD

Arlington Building
410-385-5711
Baltimore, MD

140 Back River Neck Road
410-238-0511
Baltimore, MD

9708 Bel Air Road
410-529-6911
Baltimore, MD

Bell Plaza
410-265-7758
Baltimore, MD

3425-27 Bel Air Road
410-488-8408
Baltimore, MD

238 Mecmechen
410-225-3387
Baltimore, MD

Carroll Island Shopping Center
410-335-2323
Baltimore, MD

Carol Island Road
410-284-0500
Essex, MD

Security Blvd.
410-265-7754
Baltimore, MD

2901 East Baltimore Street
410-675-1126
Baltimore, MD

3820 East Lombard Street
410-563-5412
Baltimore, MD

423 East North Avenue
410-385-1770
Baltimore, MD

8. Breast Pump Sales in Baltimore City and Surrounding Areas (continued):

Rite Aid Pharmacies (continued):

4500 Edmondson Avenue
410-947-7500
Baltimore, MD

1538 Havenwood Road
410-338-1742
Baltimore, MD

3935-37 Erdman Avenue
410-342-5035
Baltimore, MD

4380 Park Heights Avenue
410-367-4755
Baltimore, MD

3700 Falls Road
410-467-7006
Baltimore, MD

Parkville Shopping Center
410-444-1033
Baltimore, MD

2801 Foster Avenue
410-342-5078
Baltimore, MD

Patapsco Village
410-636-8737
Baltimore, MD

Gardenville Shopping Center
410-488-8454
Baltimore, MD

1620 Pennsylvania Avenue
410-383-7501
Baltimore, MD

Greenspring Shopping Center
410-653-6036
Baltimore, MD

4339 Ebenezer Road
Perry Hall Shopping Center
410-529-6181
Baltimore, MD

1521 Harford Avenue
410-962-8230
Baltimore, MD

101 Reisterstown Road
410-602-3873
Baltimore, MD

3820 East Lombard Street
410-563-7811
Baltimore, MD

The Rotunda
410-338-1741
Baltimore, MD

Ingleside Shopping Center
410-719-7606
Baltimore, MD
Sells Healthflow

29-31 Shipping Place
410-282-0644
Baltimore, MD

6402 Golden Ring Road
410-866-3409
Baltimore, MD

425-29 South Broadway
410-563-5400
Baltimore, MD

Merritt Park Shopping Center
410-282-0605
Baltimore, MD

Southside Market Place
903 East Fort Avenue
410-962-5547
Baltimore, MD

2043 Mondawmin Mall
410-225-3385
Baltimore, MD

Southview Shopping Center
410-636-8727
Baltimore, MD

4600 West Northern Parkway
410-764-3862
Baltimore, MD

Walbrook Plaza Shopping Center
410-947-7700
Baltimore, MD

8. Breast Pump Sales in Baltimore City and Surrounding Areas (continued):

Rite Aid Pharmacies (continued):

1203 Pratt Street
410-332-0140
Baltimore, MD
Sell ASP pumps

17 West Baltimore Street
410-385-5711
Baltimore, MD

3716 ½ West Belvedere Avenue
410-367-4600
Baltimore, MD

250 West Chase Street
410-752-2651
Baltimore, MD

301 West Lexington Street
410-727-1159
Baltimore, MD

100 West University Parkway
410-235-2121
Baltimore, MD

2497 Fredrick Avenue
Westside Shopping Center
410-947-7400
Baltimore, MD

South Baltimore Pharmacy
410-355-8500
631 Cherry Hill Road
Baltimore, MD
Lansinoh, Sunmark manual

SAS Institute
Rockville, MD 20852
(301) 881-8840

Total Image Care, INC.
Baltimore, MD 21231
(410) 342-9484

Toys R Us:

10200 Reistertown Road
410-356-4824
Owings Mills, MD
Electric and manual: Advent

1236 Putty Hill Avenue
410-823-8877
Towson, MD
Electric and manual: Advent, Gerber, Even-flow

8804 Pulaski Highway
410-682-5166
Baltimore, MD
Electric and manual: Medela, Even-flow, Gerber, Advent

6600 Baltimore National Pike
410-788-6678
Catonsville, MD
Electric and manual: Gerber and Even-flow

Wal-Mart
410-549-5400
1320 Liberty Road
Baltimore, MD
Sells Even-flow

Nancy Williams at St. Agnes Hospital
410-368-2624
Sells pumps—Purely Yours by Hollister/Ameda/Egnell

Willow Medical Home Care
La Plata, MD 20646
(301) 934-3046

Woodlawn Pharmacy
410-944-4600
6328 Windsor Mill Road
Baltimore, MD
Sells electric and manual pumps

9. Breast Pump Rentals in Baltimore City and Surrounding Areas

Anne Arundel County Hospital
410-897-6977
Rents breast pumps

Childbirth Education ASPO Lamaze of Metropolitan
Baltimore
410-465-9550
Ellicott City, MD
Medela line rentals, breastfeeding supplies

First Feast Breastfeeding Consulting and Supplies
410-880-8773
Columbia, MD
Rents breast pumps

Home Medical Equipment Corporation, Harford
County
800-492-1449
Medela Line rentals, electric, \$50 refundable deposit
They deliver via U.S. Postal Service.

The Lactation Center
Ellicott City, MD 21042
(410) 995-3726

Milky Way
301-609-8579

Mercy Medical Center
410-332-9604
Rents pumps; gives manual pumps to all mothers
who deliver at Mercy and plan on breastfeeding or
pumping breastmilk

Northern Pharmacy and Medical Equipment 410-
254-2055
6701 Harford Rd
Located at Northern Parkway and Harford Road
Rents and sells breast pumps; if they do not have
the pump you want, they can order it.

Nurturing Necessities
410-414-5414

Kathy Thorpe, BSN, RN, IBCLC
Beeper 410-432-3015
Arnold, MD
Rents Medela breast pumps

Respira Medical INC.
- Timonium, MD 21093
(410) 561-9055
- Woodlawn Pharmacy
410-944-4600
6328 Windsor Mill Road
Baltimore, MD
Rents pumps for 3-5 months (long-term rentals
only), must make credit card deposit
Sells Medela Brand Pump-in-Style.

St. Mary's Hospital
301-997-6505

10. Breastfeeding Web Sites

Academy of Breastfeeding Medicine
<http://www.bfmed.org>

Adoptive Breastfeeding Resource Website
<http://www.fourfriends.com/abr/>

Aldine DeGruyter Publishing
degruyter.ny@worldnet.att

American Academy of Obstetrics & Gynecology (ACOG)
<http://www.acog.org> or <http://www.acog.com/>

American Academy of Pediatrics (AAP)
<http://www.aap.org>

American College of Nurse Midwives
<http://www.acnm.org/>

American Dietetic Association (ADA)
<http://www.eatright.org>

The Attachments Catalog
<http://www.attachmentscatalog.com/>

Australia Breastfeeding Association
<http://www.breastfeeding.asn.au/>

Baby Friendly Hospital Initiative, USA
<http://www.aboutus.com/a100/bfusa>

Baby Food Action Group
<http://www.caa.org.au/groups/BFAG/index.html>

Baby Milk Action
<http://www.babymilkaction.org>

Best Start Social Marketing
beststart@mindspring.com

Breastfed Planet
<http://www.breastfedplanet.net/>

Breastfeeding and the use of Human Milk (Policy from the American Academy of Pediatrics)
<http://www.aap.org/policy/re9729.html>

Breastfeeding Assistance for Baby & You, LLC (B.A.B.Y.)
<http://www.breastfeeding.net>

Breastfeeding Babies with cleft lip/cleft palate
<http://www.widesmiles.org/cleftlinks/feeding.html>

Breastfeeding Basics
<http://www.breastfeedingbasics.com>

10. Breastfeeding Web Sites (continued):

Breastfeeding Center

<http://www.keepkidshealthy.com/breastfeeding/>

Breastfeeding Coalition of Washington

<http://www.hmhbwa.org/bcw/index.html>

Breastfeeding.com

<http://www.breastfeeding.com>

Breastfeeding Committee for Canada

<http://www.geocities.com/hotsprings/falls/1136/contents.html>

Breastfeeding Info at iVillage.com

<http://www.ivillage.com/topics/family/breastfeed>

Breastfeeding, Maternity and Parenting Resources

<http://users.aol.com/kristachan/brstres.htm>

Breastfeeding Online

<http://www.breastfeedingonline.com>

Breastfeeding Pharmacology (Dr. Thomas Hale's Site)

<http://neonatal.ttuhs.edu/lact>

Breastfeeding Resources (Anne Andrianos)

<http://web.syr.edu/~afandria/index.html>

Breastfeeding Resources-For Parents, By Parents

<http://breastfeed.com/>

Breastfeeding Support Consultants (BSC)

<http://www.bsccenter.org>

Breastfeeding Topic of the Month

<http://www.bftopics.org>

Brian Palmer, DDS (Breastfeeding and Dental Health)

<http://www.brianpalmerdds.com>

Bright Future Lactation Resource Centre (Linda Smith)

<http://www.bflrc.com>

British Medical Journal

<http://www.bmj.com/bmj/>

Canadian Pediatric Society Breastfeeding Statement

<http://www.hc-sc.gc.ca/hppb/childhood-youth/>

Caring For Kids-Breastfeeding

<http://www.caringforkids.cps.ca/babies/Breastfeeding.htm>

10. Breastfeeding Web Sites (continued):

CDC's Breastfeeding Resources
<http://www.cdc.gov/breastfeeding/>

Coalition to Improve Maternity Services (CIMS)
<http://www.healthy.net/cims/>

Congresswoman Carolyn B. Maloney
<http://www.house.gov/maloney>

Cost Benefits of Breastfeeding
<http://www.prairienet.org/laleche/bfcost.html>

Daddy, Mommy, and Me (Amy Spangler's website)
<http://daddymommyandme.com>

Dettwyler Thoughts on Breastfeeding
<http://www.prairienet.org/community/health/laleche/dettwyler.html>

FDA article on breastfeeding from FDA Consumer Magazine, Oct. 1995
http://www.fda.gov/fdac/features/895_brstfeed.html

Geddes Productions (Kitty Frantz)
<http://www.geddespro.com>

Health Education Association/Center for Breastfeeding/Healthy Children 2000
<http://www.healthychildren.cc/>

Hollister-Ameda-Egnell Breast Pump Company
<http://www.hollister.com>

INFACT Canada
<http://www.infactcanada.ca>

International Baby Food Action Network
<http://www.ibfan.org/>

International Board of Lactation Consultant Examiners (IBLCE)
<http://www.iblce.org/> or iblce@erols.com

International Lactation Consultant Association (ILCA)
<http://www.ILCA.org> or ilca@erols.com

International Pediatric Chat
<http://www.pedschat.org>

International Society for Research in Human Milk & Lactation
<http://www.isrhml.org/>

Jones & Bartlett Publishing
<http://www.jbpub.com>

10. Breastfeeding Web Sites (continued):

Kangaroo Mother Care

<http://www.kangaroomothercare.com/>

LaLeche League International (LLLl)

<http://www.LaLecheLeague.org>

Lact-Aid International

<http://www.lact-aid.com>

Lactation Associates (Marsha Walker)

http://members.aol.com/_ht_a/marshalact/lactationassociates/

Lactation Education Resources

<http://www.LERon-line.com>

Lactational Pharmacology

<http://neonatal.ttuhs.edu/lact/>

Lactnet (membership e-mail discussion group for lactation professionals)

<http://www.telcomplus.net/kga/LACTNET.HTM>

LACTNEWS (lactation conferences, etc.)

<http://www.jump.net/~bwc/lactnews.html>

Lancet

<http://www.thelancet.com/>

March of Dimes Resource Center

<http://www.modimes.org>

Maryland Breastfeeding Promotion Task Force

<http://www.fha.state.md.us/mch/breastfeeding/index.html>

Maryland WIC Program

<http://www.mdwic.org>

Maternal-Child Health Bureau of United States/Dept. of Health And Human Services

<http://www.os.dhhs.gov/mchb>

Maternal Child Nursing (MCN)

<http://www.nursingcenter.com/>

Medline—National Library of Medicine

<http://www.nlm.nih.gov>

Medela, Inc.

<http://www.medela.com>

National Alliance of Breastfeeding Advocacy (NABA)

<http://members.aol.com/marshalact/Naba/home.html>

National Association of Pediatric Nurse Associates and Practitioners, Inc.

<http://www.napnap.org/>

10. Breastfeeding Web Sites (continued):

National Breastfeeding Promotion Campaign (USDA/WIC)
<http://www.fns.usda.gov/wic/>

National Breastfeeding Media Watch Campaign
<http://www.tdh.texas.gov/lactate/media.htm>

National Center for Education in Maternal and Child Health
<http://www.ncemch.org>

New England Journal of Medicine
<http://www.nejm.org/>

Dr. Jack Newman Collection of Articles
<http://babiestoday.com/breastfeeding/drjack/>

The Nursing Lounge
http://www.parentingweb.com/lounge/lounge_index.htm

Nursing Mothers
<http://www.nursingmother.com/>

Parents Place
<http://www.parentsplace.com/expert/lactation/>

Pediatric Journal of Gastroenterology
<http://www.e-gastroped.com.br/>

Pediatrics
<http://www.pediatrics.org>

Pedschat on Lactation every Monday Night at 10:00 P.M.
<http://www.pedschat.org>

Promotion of Mother's Milk, Inc. (ProMOM)
<http://www.promom.org>

Royal Women's Hospital Breastfeeding Protocol
<http://www.rch.unimelb.edu.au/breastfeed/>

San Diego County Breastfeeding Coalition
<http://www.breastfeeding.org/>

Support Breastfeeding-Breastfeeding Legislation
<http://www.supportbreastfeeding.com/about.html>

Ted Greiner's Breastfeeding Web Site
<http://www.geocities.com/HotSprings/Spa/3156>

Texas Department of Health Web Site for Breastfeeding Promotion
<http://www.tdh.state.tx.us/lactate/default.htm>

10. Breastfeeding Web Sites (continued):

United Nations Children's Fund (UNICEF)
<http://www.unicef.org/newsline/bfhi.htm>

University of Washington
http://www.washington.edu/medical/uwmc/uwmc_clinics/matern/lactation.html

US Department HHS: Office on Women's Health
<http://www.4woman.gov/owh/about/contact.htm>

Vancouver Breastfeeding Centre
<http://www.breastfeeding1.com/>

Wellstart International
<http://www.wellstart.org/>

White River Breast Pump Company
<http://www.whiteriver.com>

WHO Global Data Bank on Breastfeeding
http://www.who.int/nut/db_bfd.htm

Women, Infants, and Children
<http://www.fns.usda.gov/wic/>

11. Pamphlets in English

Health Federation of Philadelphia
1211 Chestnut Street
Suite 801
Philadelphia, PA 19107
215-567-8001

Lactation Services
NORTH, Inc.
Wallace Building, 2nd Floor
642 North Broad Street
Philadelphia, PA 19130
215-978-4650

Motherwear, Inc.
320 Riverside Drive
Florence, MA 01062
800-950-2500

US Dept of Agriculture
Food and Nutrition Service
3101 Park Center Drive
Room 609
Alexandria, VA 22302
703-305-2554

Best Start
3500 East Fletcher Avenue
Suite 519
Tampa, FL 33613

Birth and Life Bookstore
141 Commercial Street, NE
Salem, OR 97301-3402
800-443-9942 or
(503) 378-7545 (Customer Service)

Breastfeeding Support Consultants
Judith Lauwers
228 Park Lane
Chalfont, PA 18914-3135
215-822-1281

Center for Breastfeeding
8 Jan Sebastian Way, #13
Sandwich MA 02563
508-888-8044

Childbirth Graphics
WRS Group, Inc.
PO Box 21207
Waco, TX 76702-1207
800-299-3366

Geddes Productions
10546 McVine Avenue
Sunland, CA 91040
818-951-2809

Health Education Services
PO Box 7126
Albany, NY 12224
518-439-7286

Hollister/Ameda/Egnell
2000 Hollister Drive
Libertyville, IL 60048-3781
877-992-6332

International Childbirth
Education Association
PO Box 20048
Minneapolis, MN 55420
952-854-8660 or
952-854-8772 (fax)

Lactation Associates
Marsha Walker
254 Conant Road
Weston, MA 02193-1756
781-893-3553 or
781-893-8608 (fax)

Lactation Institute and Breastfeeding Center
16430 Ventura Boulevard
Suite 303
Encino, CA 91436
818-995-1913

LaLeche League International
1400 North Meacham Road
Schaumburg, IL 60173-4840
847-519-7730

Noodle Soup (Formerly The Learning Curve of
Weingart Design)
4614 Prospect Avenue #421
Cleveland, OH 44103-4314
216-881-5151 or
800-795-9295
WeingartD@aol.com

White River Concepts
41715 Enterprise Circle North, Suite 204
Temecula, CA 92590
909-296-0081 or
909-296-0083 (fax)

Diane Wiessinger
136 Ellis Hollow Creek Road
Ithaca, NY 14850
607-277-0384

12. Pamphlets in Spanish

Best Start
3500 East Fletcher Avenue
Suite 519
Tampa, FL 33613

Childbirth Graphics
WRS Group, Inc.
PO Box 21207
Waco, TX 76702-1207
800-299-3366

Gateway Maternal and Child Health Consortium
Marilyn Hines
Newark Beth Israel Medical
Center G-3
201 Lyons Avenue
Newark, NJ 07112
201-926-7353

Geddes Productions
10546 McVine Avenue
Sunland, CA 91040
818-951-2809

Health Federation of Philadelphia
1211 Chestnut Street
Suite 801
Philadelphia, PA 19107
215-567-8001

Hollister/Ameda/Egnell
2000 Hollister Drive
Libertyville, IL 60048-3781
877-992-6332

LaLeche League International
1400 North Meacham Road
Schaumburg, IL 60173-4840
847-519-7730
Fax 847-519-0035

Medela, Inc.
1101 Corporate Drive
McHenry, IL 60050
800-435-8316

Noodle Soup (Formerly The Learning Curve of
Weingart Design)
4614 Prospect Avenue #421
Cleveland, OH 44103-4314
216-881-5151
800-795-9295
WeingartD@aol.com

White River Concepts
41715 Enterprise Circle North, Suite 204
Tenebola, CA 92590
909-296-0081 or
909-296-0083 (fax)

13. Pamphlets in Languages other than English or Spanish

Center for Breastfeeding
8 Jan Sebastian Way (Unit 13)
Sandwich MA 02563
508-888-8044
Fax 508-888-8050
Languages: Cambodian, French, Russian,
Vietnamese

Marilyn Hines
Gateway Maternal and Child Health Consortium
Newark Beth Israel Medical Center G-3
15 South 9th Street
Newark, NJ 07107
973-268-2283 or
973-268-2283 (fax)
Languages: Arabic, French, Portuguese,
Vietnamese

LaLeche League International, Inc.
1400 North Meacham Road
Schaumburg, IL 60173-4840
847-519-7730
Fax 847-519-0035
Languages: Afrikaans, Arabic, Braille (English),
Cambodian, Chinese, Dutch, Finnish, French,
German, Greek, Hebrew, Hmong-Hmoob,
Hungarian, Indonesian, Italian, Japanese, Korean,
Laotian, Polish, Portuguese, Russian,
Sotho/Xhosa/Zulu, Tagalog, Thai, Turkish,
Vietnamese

Mary Greeley Medical Center
1111 Duff Avenue
Ames, IA 50010
515-239-2011
Languages: Arabic, Hindu, Indonesian, Korean,
Taiwanese

Medela, Inc.
1101 Corporate Drive
McHenry, IL 60050
800-435-8316
Languages: French

Pregnancy & Birth
Healthy Mothers, Healthy Babies, Coalition of
Washington State
300 Elliott Avenue W
Suite 300
Seattle, WA 98119-4118
800-322-2588
Languages: Chinese, Korean, Russian, Vietnamese

White River Concepts
41715 Enterprise Circle North, Suite 204
Temecula, CA 92590
909-296-0081
Languages: Vietnamese

14. Books

- AAP & ACOG: (1997) *Guidelines for Perinatal Care* (4th Ed.). \$68.95
American Academy of Pediatrics
141 Northwest Point Road
PO Box 927
Elk Grove Village, IL 60009-0927
800-433-9016
- Auerbach, K. & Riordan, J. (2000). *Clinical lactation: A visual guide*. Sudbury, MA: Jones and Bartlett Publishers.
- Baumslag, N. & Michels, D. (1995). *Milk, money, and madness: The culture and politics of breastfeeding*. Westport, CT: Bergin and Garvey.
- Biancuzzo, M. (1999). *Breastfeeding the newborn: Clinical strategies for nurses*. St. Louis, MO: Mosby Year Book, Inc.
- Biancuzzo, M. (2000). *Helping mothers choose and initiate breastfeeding*. Herndon, VA: WMC Worldwide.
- Briggs, G., Freeman, R., & Yafee, S. (1998). *Drugs in pregnancy and lactation* (5th ed.). Baltimore: Williams and Wilkins.
- Cadwell, K. & Turner-Maffei, C. (2002). *Reclaiming breastfeeding for the United States: Protection, promotion, and support*. Boston: Jones & Bartlett Publishing.
- Cadwell, K, Turner-Maffei, C., O'Connor, B., & Blair, A. *Maternal and infant assessment: Physical assessment for breastfeeding and human lactation*
- Christensson, K.: (1994) *Care of the newborn Infant: Satisfying the need for comfort and energy conservation*.
Department of Woman and Child Health and International Health and Social Medicine
Karolinska Institute
Stockholm, Sweden
- Dann, M. (2001). *Lactation guide for primary care providers*. Boston: Jones & Bartlett Publishing.
- Davis, Marie: (1996) *Breastfeeding: The promise for tomorrow*.
Continuing Medical Education Resource
PO Box 15163
Sacramento, CA 95851-0163
800-232-4238
- Davis, M.: (1998) *The Lactation Consultant's Clinical Practice Manual*. Dayton, OH Bright Future Lactation Resource Centre
- DeCoopman, J.M.: (1995) *Breastfeeding Management for Health Care Professionals* (2nd Ed.). \$25
- Frantz, K.: (1994) *Breastfeeding Product Guide*. \$23.95
Geddes Products
10546 McVine Avenue
Sunland, CA 91040
818-951-2809
<http://www.geddespro.com>
- Gartner, L.M.: (1994) *Breastfeeding in the Hospital*. Seminars in Perinatology 18(6) December 1994
WB Saunders Company
Periodicals Department
6277 Sea Harbor Drive
Orlando, FL 33887
- Goertz, S. & McCamman, S. (2000). *Creating breastfeeding friendly environments vol.1*. Boston: Jones & Bartlett Publishers, Inc.
- Hale, T. (1999). *Clinical therapy in breastfeeding patients*. Amarillo, TX: Pharmasoft Medical Publishing.
- Hale, T., Ilett, K., & Ilett, K. (2002). *Drug therapy and breastfeeding: From theory to clinical practice*. Boca Raton, FL: Parthenon Publishing Group.
- Hale, T. (1999). *Medications and mother's milk*. Amarillo, TX: Pharmasoft Medical Publishing.
- Henschel, D., Royal College of Midwives, & Inch, S. (1996). *Breastfeeding: A guide for midwives* (1st ed.). Woburn, MA: Butterworth-Heinemann.
- Hertz, G.: (1997) *Breastfeeding management*.
Institute of Medicine. (1991). *Nutrition during lactation*. Washington, DC: National Academy Press.
- Institute of Medicine. (1992). *Nutrition during pregnancy and lactation: An implementation guide*. Washington, DC: National Academy Press.

14. Books (continued):

- Jolley, S. (1998). *Breastfeeding triage tool*. Seattle, WA: Seattle-King Country Department of Health.
- Koniz-Booher, P., Fishman, C., Parlato, M., Roberts, A.: *Q/A On Infant Feeding: A Panel of Experts Takes a New Look*.
- La Leche League International. *Lactation Consultant Series*. Schaumburg, IL: La Leche League International.
- Lang, S.: (1997) *Breastfeeding Special Care Babies*.
- Lawrence, J. & Woessner, C. (2000). *Counseling the nursing mother*. Sudbury, MA: Jones and Bartlett Publishers.
- Lawrence, R. & Lawrence, R. (1999). *Breastfeeding: A guide for the medical professional*. St. Louis, MO: Mosby Year Book, Inc.
- Maloney, C. & Michels, D. (Eds). (2001). *Breastfeeding annual international 2001*. Washington, DC: Platypus Media, LLC.
- Marmet, C., Shell, E.: (1989) *Lactation Forms: A Guide to Lactation Consultant Charting*. \$45
- Maryland WIC Program: Breastfeeding Kardex: Guidance for Counseling the Breastfeeding Mom. \$17.50
410-273-5658
- Merewood, A. & Philipp, B. (2001). *Breastfeeding conditions and diseases*. Pharmasoft Publishing.
- Mohrbacher, N., Stock, J.: (1996) *Breastfeeding Answer Book* (2nd Ed.). Schaumburg, IL: LaLeche League International, Inc.
- Neifert, M.: Early assessment of the breastfeeding infant. *Contemporary Pediatrics*. October 1996.
- NY State Department of Health
Bureau of Child and Adolescent Health
Corning Tower
Empire State Plaza
Albany, NY 12237-0618
Activity Package for Grades K-12 on *Breastfeeding: First Step to Good Health*
Free
- Palmer, G.: (1993) *The Politics of Breastfeeding* (2nd Ed.). London: Pandora Press.
- Renfrew, M., Fisher, C., Arms, S. (1990). *Breastfeeding: Getting Breastfeeding Right For You*. Berkeley, CA: Celestial Arts.
- Riordan, J., Auerbach, K.G. (1999). *Breastfeeding and human lactation* (2nd Ed.). Boston: Jones & Bartlett Publishers.
- Riordan, J., Auerbach, K.G.: (1997). *Pocket guide to breastfeeding and human lactation*. Boston: Jones & Bartlett Publishers.
- Riordan, J., Auerbach, K.G.: (1997). *Resource guide to accompany breastfeeding and human lactation*. Boston: Jones & Bartlett Publishers.
- Rosenthal, M. (2000). *Breastfeeding sourcebook*. McGraw-Hill Professional.
- Saunders, S., Carroll, J., & Johnson, C. (1995). *Breastfeeding: A problem solving manual*. Dallas: Essential Medical Information System, Inc.
- Stuart-Macadam, P. & Dettwyler, K. (1995). *Breastfeeding biocultural perspectives*. Hawthorne, NY: Aldine De Gruyter.
- Tully, M.R., Overfield, M.: (1987) *Breastfeeding Counseling Guide*. \$37.95
Lactation Consultants of North Carolina
PO Box 18173
Raleigh, NC 27619-8173
919-847-4903
- Walker, M: (1995) *Hospital Breastfeeding Policies and Protocols: Model for the Short Stay*. \$35.95
Lactation Associates
254 Conant Road
Weston, MA 02493-1756
617-893-3553, Fax 617-893-8608
- Walker, M. & Driscoll, J. (1994). *Breastfeeding your premature baby*. Weston, MA: Lactation Associates.
- Wellman, L., Danner, S., Coffey, P., March of Dimes, & Dowling, D. (1997). *Breastfeeding the infant with special needs*. White Plains, NY: March of Dimes Birth Defects Foundation.

14. Books (continued):

White, E. (1999). *Breastfeeding and HIV/AIDS: The research, the politics, the women's responses*. McFarland & Company Incorporated Publishers.

Wilson-Clay, B. & Hoover, K. (1999). *The breastfeeding atlas*. Austin, TX: LactNews Press.

Worthington-Roberts, B. & Rodwell Williams, S. (1996). *Nutrition in pregnancy and lactation*. St. Louis, MO: Mosby Year Book, Inc.

Parents' Books:

Adamson, E. & Kays, M. (1998). *Breastfeeding*. Berkley, CA: Berkley Publishing Group.

American Academy of Pediatrics. (2002). *The new mother's guide to breastfeeding*. Bantam Books.

Benson Brown, A. & McPherson, K. (Eds). (1998). *The reality of breastfeeding: Reflections by contemporary women*. Westport, CT: Greenwood Publishing.

Biehn, M. (1998). *Mother to mother on breastfeeding*. Green Pastures Press.

Black, R., Jarman, L., & Simpson, J. (1998). *The process of breastfeeding*. Boston: Jones & Bartlett Publishing.

Bumgarner, N. (1982). *Mothering your nursing toddler*. Schaumburg, IL: LaLeche League International.,

Cook, C. (2002). *What to expect when breastfeeding*. London: Random House.

Dalley, J. & Dalley, N. (1997). *The meat and potatoes of breastfeeding: Easy nutritional guidelines for breastfeeding moms*. Guilford, CT: Globe Pequot Press

Dana, N & Price, A. (1987). *The Working Woman's Guide to Breastfeeding*. New York: Meadowbrook.

Eiger, M. & Olds, S. (1999). *The complete book of breastfeeding: The classic guide for every nursing mother*. Bantam Books, Inc.,

Gotsch, G. (1994). *Breastfeeding pure and simple*. Schaumburg, IL: LaLeche League International.

Gotsch, G. & LaLeche League International. (1999). *Breastfeeding your premature baby*. Schaumburg, IL: LaLeche League International.

Gromada, K., La Leche League International, & Torgus, J. (1999). *Mothering multiples: Breastfeeding and caring for twins or more!!!*. Schaumburg, IL: LaLeche League International.

Huggins, K. (1999). *The nursing mother's companion* (4th Ed.). Boston: The Harvard Common Press.

Kitzinger, S. & Durrell McKenna, N. (1998). *Breastfeeding your baby*. New York: Alfred Knopf Publishing.

LaLeche League International, Inc. (1999). *How Weaning Happens*. Schaumburg, IL: LaLeche League International.

LaLeche League International, Inc. (1997). *The womanly art of breastfeeding* (6th Ed.). Schaumburg, IL: LaLeche League International.

Merewood, A. & Philipp, B. (2001). *Breastfeeding conditions and diseases*. Pharmasoftware Publishing.

Moran, E. & Gotsch, G. (2000). *Bon appetit baby!: The breastfeeding kit*. Freedom, CA: Treasured Child Publications.

Neifert, M. (1998). *Dr. Mom's Guide to Breastfeeding*. New York: Penguin Group.

Newman, J. & Pitman, T. *Dr. Jack Newman's guide to breastfeeding*. Roseville, CA: Prima Publishing.

Newman, J. & Pitman, T. (2000). *The ultimate breastfeeding book of answers*. Roseville, CA: Prima Publishing.

Peterson, D. (2000). *Breastfeeding the adopted infant*. San Antonio, TX: Corona Publishing Company.

Pryor, G. (1997). *Nursing mother, working mother*. Boston: Harvard Common Press.

Renfrew, M., Fisher, C., & Arms, S. (2000). *Beastfeeding: Getting breastfeeding right for you*. Ten Speed Press

Royal College of Midwives. (2001). *Successful breastfeeding*. Churchill Livingstone, Inc.

Sears, M. & Sears, W. (2000). *The breastfeeding book: Everything you need to know about nursing your child-from birth through weaning*. Boston: Little, Brown & Company.

14. Books (continued):

Stanway, P. & Stanway, A. (1996). *Breast is best: The authoritative book on breastfeeding*. London: Macmillan Publishers.

Tamaro, J. (1998). *So that's what they're for!: Breastfeeding basics*. Holbrook, MA: Adams Media Corporation.

Tucker, F. (1999). *Practical parenting problem solvers: Breastfeeding*. London: Pan Books.

West, D. & Tidball, S. (2001). *Defining your own success: Breastfeeding after breast reduction surgery*. Schaumburg, IL: LaLeche League International.

White, E. (1999). *Breastfeeding and HIV/AIDS: The research, the politics, the women's responses*. McFarland & Company Incorporated Publishers.

Wiggins, P. (1998). *Breastfeeding: A mother's gift*. Lactation Associates Publishing Company.

Books for Parents in Spanish:

Amamantar Es Facil (Breastfeeding Is Easy) by Charlene Stokamer, \$1, bulk orders 200+ \$0.90 each, 400+ \$0.80 each, 1000+ \$0.75 each, 5000+ \$0.55 each

Twelve page bilingual booklet with photographs. Seventh grade reading level (SMOG test). Especially good when family is a mix of English and Spanish speakers/readers (e.g. new mother and grandmother).

Contact: Lactation Information Services
749 Howard Street
Teaneck, NJ 07666
201-837-2522

Lactancia: Una Guia para los Padres (Breastfeeding: A Parent's Guide (6th Ed.)) by Amy Spangler, \$6, bulk orders available
Contact: Amy Spangler
PO Box 501046
Atlanta, GA 31150-1046
404-913-9332, Fax 770-913-0822

Por Que Deberia Amamantar A Mi Bebe? (Why Should I Nurse My Baby?) by Pamela K. Wiggins, IBCLC
L.A. Publishing Company
PO Box 773
Franklin VA 23851
804-562-2223, for orders 800-397-5833

For the Following Books for Parents in Spanish, Contact:

LaLeche League International
1400 North Meacham Road
Schaumburg, IL 60173-4840
847-519-7730, Fax 847-519-0035

El Arte Femenino de Amamantar (The Womanly Art of Breastfeeding)

Amamantar Sencillo y Puro (Breastfeeding Pure and Simple)

Querer Es Poder (To Want It Is to Be Able to Do It): Simple text introduces basics of breastfeeding

En Busca del Oro Liquido (Breastfeeding Answer Book)

Lactancia Materna Libro de Respuestas (Breastfeeding Answer Book)

Books for Parents in Languages other than English or Spanish:

Why Should I Nurse My Baby?
L.A. Publishing Co.
PO Box 773
Franklin, VA 23851
800-397-5833
Languages: French, Creole (Haitian)

14. Books (continued):

The Following Books are Available From:

LaLeche League International
1400 North Meacham Road
Schaumburg, IL 60173-4840
847-519-7730, Fax 847-519-0035

Beraterinnen Handbuch (Leader's Handbook):
German

Stillen Einfach Nur Stillen (Breastfeeding Pure and Simple): German

Breastfeeding Pure and Simple (Hebrew)

Daredemo Dakiru Bonyuikuji (The Womanly Art of Breastfeeding): Japanese

Das Handbuch Fur Die Stillende Mutter (The Womanly Art of Breastfeeding): German

Handboek Borstvoeding (The Womanly Art of Breastfeeding): Dutch

L'arte Dell'allattamento Materno (The Womanly Art of Breastfeeding): Italian

Sztuka Karmienia Piersia (The Womanly Art of Breastfeeding): Polish

L'art de L'allaitement Maternei (The Womanly Art of Breastfeeding): French

Das 24 Stunden-Baby (The Fussy Baby): German
Que faire quand bebe pleure? (The Fussy Baby): French

Handbuch fur die Stillberatung (Breastfeeding Answer Book): German

Books for Health Care Providers in Spanish:

For books, contact:
LaLeche League International
1400 North Meacham Road
Schaumburg, IL 60173-4840
847-519-7730
Fax 847-519-0035

Proteccion, Promocion y Apoyo de la Lactancia Natural (Protecting, Promoting and Supporting Breastfeeding)

Guia para Promotores en Salud Materno Infantil y Lactancia Materna, A Guide for Promoting Maternal/Infant Health and Breastfeeding

Manual Para Monitoras en Lactancia Materna, An illustrated guidebook for health-care workers.

15. Breastfeeding Magazines and Journals

For Health Care Providers and Parents:

Abreast of Our Times: A newsletter for breastfeeding advocates, \$30
National Alliance for Breastfeeding Advocacy
254 Conant Road
Weston, MA 02193-1756
781-893-3553, Fax 781-893-8608
members.aol.com/marshalact/lactationassociates

Breastfeeding Abstracts: Quarterly publication abstracting current research,
\$12.50/yr or \$3.50 ea.

Leaven: Bi-monthly publication targeted to LaLeche League Leaders, \$12

New Beginnings: Bi-monthly publication for mothers, \$20/yr (6 issues)

Contact: LaLeche League International, Inc.
1400 North Meacham Road
Schaumburg, IL 60173-4808
847-519-7730
Fax 847-519-0035

Breastfeeding Review: Semi-annual publication of breastfeeding articles,
\$56/yr or \$102/2 yrs AUS\$
Australian Breastfeeding Association
www.breastfeeding.asn.au
PO Box 4000
Glen Iris, Vic 3146, Australia

Journal of Mammary Gland Biology and Neoplasia: individual \$63/yr, institutional \$338/yr
Plenum Publishing Corporation
233 Spring Street, 7th floor
New York, NY 10013-1578
888-640-7378 or 212-620-8000
fax: 212-647-1898

The Mother Is Me
An innovative feminist quarterly chronicling both the extraordinary and the everyday experience of mothering.
Colleen McSpirit
64 Voorhis Rd.
Lincoln Park, NJ 07035
www.motherisme.com
\$15.95/1 year, samples available for \$3.95

Journal of Human Lactation:
individual non-member \$99/yr, \$37ea,
institutional \$340/yr, \$98 ea.
The official journal of the International Lactation Consultant Association featuring current research, original articles, reviews of latest publications, and news from around the world.

Individual: International Lactation Consultant Association
1500 Sunday Dr., Ste 102
Raleigh, NC 27607
919-787-5181, Fax 919-787-4916,
ilca@erols.com
Institutional: Sage Science Press,
2455 Teller Rd.
Thousand Oaks, CA 9132
805-499-9774

Mothering
The Magazine of Natural Family Living
PO Box 1690
Santa Fe, NM 87504
800-984-8116 or 505-984-8116
www.mothering.com
\$19.95/6 issues, \$34/12 issues, \$48/18 issues.

Nurturing Magazine
Quarterly Magazine of Natural Parenting
Ste. 133, 612-500 Country Hills Blvd. N.E.
Calgary, Alberta
Canada T3K 5K3
www.nurturing.ca
\$25/1 year, \$48/2 years

Update: A quarterly publication updating information in *Drugs in Pregnancy and Lactation*, \$109/yr
Lippincott Williams and Wilkins
351 West Camden Street
Baltimore, MD 21201-2436
800-638-0672
www.lww.com

15. Breastfeeding Magazines and Journals (continued)

Journal of Perinatal Education

Published quarterly by Lamaze International, provides parent education in the areas of childbirth, pregnancy, breastfeeding, neonatal care, postpartum, early parenting and young family development.

Lamaze International

2025 M St, Ste. 800

Washington, DC 20036-3309

lamaze@dc.sba.com

www.lamaze.org

800-368-4404

Institutional \$150/year, Individual \$55/year

Backorders \$25 each.

Newsletters for Parents in Spanish:

Nuevo Comienzo (New Beginnings): Quarterly publications, \$18/yr

Contact LaLeche League International

1400 North Meacham Road

Schaumburg, IL 60173-4808

847-519-7730, Fax 847-519-0035

16. Breastfeeding Videos

Videos for Health Care Workers in English:

Vida Health Communications
6 Bigelow Street, Cambridge, MA 02139
800-550-7047
Fax 617-864-7862
www.vida-health.com

The Clinical Management of Breastfeeding, **\$395**

Part I: The Science and Art of Breastfeeding: **45 minutes, introduction to human lactation and clinical management**

Module 1: The Benefits of Breastfeeding
Module 2: History, Culture and Technology
Module 3: Anatomy and Physiology of Lactation

Module 4: Breastfeeding Management

Part II: Putting It All Into Practice: 57 minutes, specific rolls that health care providers play

Module 5: Prenatal Care
Module 6: Labor and Delivery
Module 7: Mother/Baby Care
Module 8: Postpartum Follow-Up
Module 9: Pediatric/Well Baby Care

Breastfeeding: The Why-To Video, \$150
#BFW01, dispels myths and stereotypes of breastfeeding

Breastfeeding: The How-To Video, \$150
#BFH01, builds confidence in mom by showing that breastfeeding is not complicated
Both for \$250 #BFS01

Risk-free 21-day trial #BFS99

Geddes Productions
PO Box 41761, Los Angeles, CA 90041-0761
323-344-8045 fax: 323-257-7209
www.geddespro.com www.geddesproduction.com

Breastfeeding Techniques that Work
Series of 8 tapes, 14-51 minutes each, \$39.95 each: First Attachment, First Attachment in Bed, First Attachment After Cesarean, Supplemental Nursing System™, Hand Expression, Successful Working Mothers, Burping the Baby, The First Week

Delivery Self Attachment, \$14.95

6 minutes, by Dr. Lennart Righard

Kangaroo Mother Care, \$40, 26 min, by Dr. Nils Bergman

UNICEF Division of Communication
Video Distribution Unit
212-326-7742 Fax: 212-326-7375
Email: videorders@unicef.org or frashid@unicef.org

Breastfeeding: Compilation #1
A Global Priority, Breastfeeding Rediscovered, Feeding Low Birth Weight Babies, Mother Kangaroo—A Light of Hope **All on one tape, \$40**

Breastfeeding: Compilation #2
Kingston General Hospital, Breast for Babies, Investing in the Future, Learning to be Baby-Friendly All on one tape, \$40

Childbirth Graphics
WRS Group, Inc., PO Box 21207, Waco, TX 76702-1207
800-299-3366 fax: 888-977-7653
www.childbirthgraphics.com
Breastfeeding: A Guide to Getting Started, 20 minutes, \$24.95

14 Steps to Better Breastfeeding, 16 min, \$99.95

Breastfeeding: Dealing with the Problems, 24 min, \$79.95

Breastfeeding: Focus on Attachment, 18 min, \$79.95

Breastfeeding: A Guide to Successful Positioning, 12 min, \$79.95

And more...

Hollister Inc.
Contact Nikki x2550
2000 Hollister Drive
Libertyville, IL 60048-3781
800-323-4060

Breastfeeding the Preterm Infant—A Positive Approach, \$20

Lactation Assistance Services
120 Paoli Street
Verona, WI 53593-1323
608-845-7269
jsweet@ssc.wisc.edu
Cup Feeding, 5 minutes, by Ruth Sweet, \$15

16. Breastfeeding Videos (continued):

INFACT Canada
6 Trinity Square
Toronto, Ontario Canada M5G 1B1
416-595-9819 fax:416-591-9355
www.infactcanada.ca

Protecting Infant Health: Making the Code Work, \$20

Protecting Infant Health: Breast Is Best, \$60

Concept Media, Inc.
Box 19542
Irvine, CA 92623-9542
fax: 949-660-0206
www.conceptmedia.com
Email: info@conceptmedia.com
Ineffective Breastfeeding, 1991, 23 min, \$175

Baby-Friendly USA
U.S. Committee for UNICEF
8 Sebastian Way #22
Sandwich, MA 02563
fax: 508-888-8050
www.babyfriendlyusa.org
Email: info@babyfriendlyusa.org
Learning to be Baby-Friendly,
1993, 33 min, \$13

International Childbirth Education Association (ICEA)
PO Box20048
Minneapolis, MN 55420
952-854-8660 Fax: 952-854-8772
info@icea.org
www.icea.org

The Benefits of Breastfeeding, 1999, 21 min, \$59.95. Teaching video divided into five separate segments, including Health Benefits for Baby, Nutrition Benefits for Baby, Benefits for You, Common Questions, and Keys to Successful Breastfeeding.

Delivery Self-Attachment, 1992, 5 min, \$14.95. A visual summary of research on the newborn's ability to crawl to the mother's breast, self-attach and suckle.

Cascade Health Care Products, Inc.
141 Commercial St. NE
Salem, Oregon 97301-3402
fax: 503-371-5395
onecascade@worldnet.att.net
www.lcascade.com
The Benefits of Breastfeeding, 21 min, \$59.95

Lamaze International
2025 M St, Ste. 800
Washington, DC 20036-3309
800-368-4404 fax: 202-367-2128
lamaze@dc.sba.com
www.lamaze.org

Through Their Eyes, 1997, 3 min, \$16.50. Beautiful, multicultural pictures of breastfeeding babies, mothers and families. Spangler has suggested that you have the video put on a continuous loop so that the images can be replayed over and over as students are entering or leaving class.

Delivery Self-Attachment, 1992, 5 min, \$14.95
Benefits of Breastfeeding, 1999, 21 min, \$59.

Eagle Video Productions, Inc.
2201 Woodnell Dr.
Raleigh, NC 27603-5240
919-779-7891 Fax: 919-779-7284
bruce@eaglevideo.com
www.eaglevideo.com
The Benefits of Breastfeeding, 1999, 21 min, \$59.

Pharmasoft Publishing
21 Tascocita Dr.
Amarillo, TX 79124-7301
800-378-1317 or 800-376-9900
Fax: 806-376-9901
kami@ibreastfeeding.com
www.ibreastfeeding.com
From Bottles to Breasts to Baby-Friendly; The Challenge of the Change, from the Breastfeeding Center at Boston Medical Center, 15 min, \$20
Mother & Baby... Getting it Right, Breastfeeding: Positioning & Attachment with Sue Cox, 20 min, \$41
Helping Mother to Breastfeed, No Finger Investment, by the Royal College of Midwives, 20 min, \$41
A Premie Needs His Mother, First Steps to Breastfeeding Your Premature Baby, by Jane Morton, M.D., 2 part video, Part I 35 min, Part II 21 min, \$125.

16. Breastfeeding Videos (continued):

For Physicians in English:

Hollister Inc.

2000 Hollister Drive

Libertyville, IL 60048-3781

Tongue-Tie: Impact on Breastfeeding, by

Evelyn Jain, MD

18 minutes, \$59.95

Penn State University

Agricultural Information Services

119 Agricultural Administrative Building

University Park, PA 16802

814-865-6309

Nurturing with Nutrition, Breastmilk and Infant

Formulas, compares breastmilk to formula, 25 min, \$35

Magic Lantern Communications

Unit 3, 8755 Ash St.

Vancouver V6P 6T3 Canada

800-667-1500, 604-324-2600, Fax 604-324-4855

Lifecycles: Lactation and Infancy, 30 min, \$49,

Breastfeeding, from "The baby in me" series, 30 min, \$25.

New York State Department of Health and School of Public Health

One University Place

Rensselaer, NY 12144

518-402-0330, Fax 518-402-1137

Breastfeeding Grand Rounds, \$35, May 20, 2002

Videos for Parents in English:

Linda Smith

6540 Cedarview Court

Dayton, OH 45459

888-235-7201, Fax 937-438-3229

www.bflrc.com

A Healthier Baby by Breastfeeding, 20 minutes, \$24

Three basic messages presented: How to get started, how to make enough milk, and how to get help. In English and Spanish.

Breastmilk Solutions

Videotransform

930 Commercial St.

Palo Alto, CA 94303

888-566-7866

www.breastmilksolutions.com

A Premie Needs His Mother – First Steps in Breastfeeding the Premature Infant, comes as a 2 part video or a DVD (same price). A

comprehensive guide to learning in valuable techniques of breast pumping and transitioning the baby from tube feeding to breastfeeding.

Part I (35 minutes) is intended for mothers who are about to, or who have just recently delivered.

Mothers are recommended to watch Part II (21 minutes) just as soon as her baby is ready to be held.

\$125 individually, \$95 each for 10+, \$65 each for 50+.

Breastfeeding, A Guide to Getting Started, 20 minutes, \$65. Instructional booklet included.

Childbirth Graphics

WRS Group, Inc., PO Box 21207, Waco, TX 76702-1207

800-299-3366 fax: 888-977-7653

www.childbirthgraphics.com

Breastfeeding: A Special Relationship, 24

minutes, \$79

Covers a wide range of topics from advantages of breastfeeding to working and breastfeeding. In English, Spanish, and Russian.

Teen Breastfeeding Video Set (2) 55 min, \$139.95, for grade 7 – college.

Working with Breastfeeding? Yes you can do it!

30 min, \$65.

Infant Cues: A Feeding Guide, 10 min, \$69.95 with English or Spanish subtitles.

Babytalk, 60 min, \$25

The Benefits of Breastfeeding, 14 min, \$59, available in English and Spanish.

Understanding Breastfeeding: Social and Emotional Aspects, set (2).

And more...

Medela/Materials Clearinghouse

Sadia Ahmed

111 Market Place, Suite 310

Baltimore, MD 21202

410-659-6300

Giving You the Best that I Got, Baby, featuring Anita Baker, 14 minutes, \$20; Motivational video especially for African-American women produced by MD WIC program.

16. Breastfeeding Videos (continued):

Geddes Productions
PO Box 41761, Los Angeles, CA 90041-0761
323-344-8045 fax: 323-257-7209
www.geddespro.com
www.geddesproduction.com

Delivery Self Attachment, 6 minutes, \$14.95
Motivational video used in prenatal class to assist in decisions made during labor and following delivery that affect breastfeeding.

Breastfeeding Techniques That Work™, A series of 8 tapes by Kittie Frantz from 14 to 51 minutes, each sells for \$39.95

Titles: First Attachment, First Attachment in Bed, Hand Expression, First Attachment after Cesarean, Burping the Baby, Successful Working Mothers, Supplemental Nursing System™, The First Week

Medela, Inc.
1101 Corporate Dr., McHenry, IL 60050
800-435-8316 fax: 815-363-1246
www.medela.com
customer.service@medela.com

Breastfeeding Your Baby: A Mother's Guide, 64 min. Covers a wide range of topics from advantages of breastfeeding to working and breastfeeding.

Breastfeeding Your Baby: Positioning, 15 min. Several pump videos also available in English, Spanish, and French. Call for pricing.

Growing With Baby
1230 Marsh Street
San Luis Obispo, CA 93401
800-524-9554

Breastfeeding: Coping with the First Week with Chloe Fisher, 30 min, \$79.95

Injoy Videos
www.injoyvideos.com
1435 Yarmouth, Ste 102
Boulder, CO 80304
800-326-2082 303-447-2082

Teen Breastfeeding: The Natural Choice 1998, **2 volumes, \$139.95 (English or Spanish)**

- **Volume I Why Breastfeed?**, 20 minutes, \$79.95

- **Volume II Starting Out Right**, 30 minutes, \$79.95

Breastfeeding and Basketball, 8 minutes, \$79.95

Breastfeeding: Better Beginnings, 20 minutes, \$59.95 (English or Spanish)

Breastfeeding Basics 1999, 4 volumes, \$224.80, or \$99.95 individually.

14 Steps to Better Breastfeeding, 16 min, \$99.95 (English or Spanish)

Breastfeeding and Kangaroo Care for Your NICU Baby, 8 min, \$89.95

The Breastfeeding Game: Benefits, a fun and entertaining game show format, 22 min, \$99.95

INFACT Canada
6 Trinity Square
Toronto, Ontario M5G 1B1 Canada
416-595-9819, fax: 416-591-9355
www.infactcanada.ca

Breast is Best, 35 minutes, \$60, This video comes from Norway and was made by the government to protect the status of breastfeeding and to prevent backsliding.

The Breastfeeding Game: Benefits, a fun and entertaining game show format, 22 min, \$99.95

Best Start
4809 East Busch Blvd. Ste. 104
Tampa, FL 33617
800-277-4975 or 813-971-2119
Fax: 813-971-2280

Email: beststart@beststartinc.org

For All the Right Reasons, 22 minutes, \$25

Nobody Loves Them Like You, 22 minutes, \$25
Features testimonials from WIC mothers designed to motivate women to breastfeed.

Loving Our Children, Loving Ourselves, 36 min, \$25, by the Chicago Peer Counselor Group.

White River Concepts
41715 Enterprise Circle North, Ste. 204
Temecula, CA 92590
800-824-6351 or 909-296-0081
Fax 909-296-0083
www.whiteriver.com

Breastfeeding Success: Shows the use of the White River Breast Pump.

Northwestern Memorial Hospital
Special Care Nursery
251 East Huron Street
Chicago, IL 60611
312-926-7398

Kangaroo Care, \$65, Describes holding premature infants skin-to-skin and its benefits.

Pennsylvania Department of Health
WIC program
Health and Welfare Building, Rm 604
Harrisburg, PA 17120
717-783-1289

Smart Women, Smart Choices: Free, Aimed to motivate the rural population in Pennsylvania.

16. Breastfeeding Videos (continued):

North Carolina Department of Environment, Health & Natural Resources
1929 Mail Service Center
Raleigh, NC 27699-1929
919-715-3407, Fax 919-715-3410
Sheila.cromer@ncmail.net
Produced for Deaf/Hard of Hearing
American Sign Language (ASL); Closed Captioned and Voiced (in-state orders only)
Breastfeeding: A Mother's Special Gift, 15 min
Show Your Baby with Love: Breastfeed, 20 min.
Call for prices.

Superior Duplication Services
Boyd Lougee
800-750-7532
Breastfeeding: A Mother's Special Gift, 15 min
Show Your Baby with Love: Breastfeed, 20 min.
Call for prices.

Noodle Soup
4614 Prospect Ave. #328
Cleveland, OH 44103-4314
216-881-5151 or 800-795-9295
www.noodlesoup.com
Why Breastfeed? & Starting Out Right, for teens, 20 min each, \$79.95 ea, \$139.95 (both)
Breastfeeding and Basketball, geared towards men, 8 min, \$79.95

Videos in Spanish for Parents:

Linda Smith
6540 Cedarview Court
Dayton, OH 45459
937-438-9458, 888-235-7201, Fax 937-438-3229
http://www.bflrc.com
Un Bebe mas Saludable con Leche Materna (A Healthier Baby by Breastfeeding), 20 minutes, \$24;
Three basic messages presented: how to get started, how to make enough milk, and how to get help. In English and Spanish.

Childbirth Graphics
WRS Group, Inc.
PO Box 21207
Waco, TX 76702-1207
800-299-3366 fax: 888-977-7653
www.childbirthgraphics.com
Breastfeeding: A Special Relationship, 24 minutes, \$79
Infant Cues: A Feeding Guide, 10 min, \$69.95
Spanish subtitles
The Benefits of Breastfeeding, 14 min, \$59

Geddes Productions
PO Box 41761, Los Angeles, CA 90041-0761
323-344-8045 fax: 323-257-7209
http://www.geddespro.com
Primer Afecto (First Attachment, Vol. I), \$39.95
Haciendo Eructar al Bebe (Burping the Baby, Vol. IV), \$39.95
Sacar Leche Manualmente (Hand Express, Vol. VI), \$39.95
Sistema de Alimentacion (Supplemental Nursing System™, Vol. VII), \$39.95

Medela, Inc.
1101 Corporate Dr.
McHenry, IL 60050
800-435-8316 Fax: 815-363-1246
www.medela.com
customer.service@medela.com
Lactancia Materna y Accesorios (Maternal Lactation and Accessories)
Amamantando a su Bebe: Colcacion (Breastfeeding Your Baby: Positioning), Vol. 6/Colocacion, 15 min. Call for pricing.

Noodle Soup
4614 Prospect Ave, #328
Cleveland, OH 44103-4314
216-881-5151 or 800-795-9295
www.noodle.soup.com
Why Breastfeed? & Starting Out Right, for teens, 20 min each, \$79.95 each, \$139.95 (both)

Northwestern Memorial Hospital
Special Care Nursery
333 East Superior
Chicago, IL 60611
Kangaroo Care, \$65, Describes holding premature infants skin-to-skin and its benefits.

Best Start
4809 East Busch Blvd. Ste. 104
Tampa, FL 33617
800-277-4975 or 813-971-2119
Fax: 813-971-2280
Email: beststart@beststartinc.org
Nobody Loves Them Like You, 22 minutes, \$25

Cascade Health Care Products, Inc.
141 Commercial St. NE
Salem, Oregon 97301-3402
fax: 503-371-5395
onecascade@worldnet.att.net
www.lcascade.com
The Benefits of Breastfeeding, 21 min, \$59.95 (Spanish)

16. Breastfeeding Videos (continued):

Lamaze International
2025 M St, Ste. 800
Washington, DC 20036-3309
800-368-4404 fax: 202-367-2128
lamaze@dc.sba.com
www.lamaze.org

Benefits of Breastfeeding, 1999, 21 min, \$59.

Eagle Video Productions, Inc.
2201 Woodnell Dr.
Raleigh, NC 27603-5240
919-779-7891 Fax: 919-779-7284
bruce@eaglevideo.com
www.eaglevideo.com

The Benefits of Breastfeeding, 1999, 21 min, \$59.

Breastmilk Solutions
Videotransform
930 Commercial St.
Palo Alto, CA 94303
888-566-7866
www.breastmilk solutions.com

Guía de la Dra. Jane Morton Para Una Buena Lactancia, 20 minutes, \$65 each. Instructional booklet included.

A more extensive list of Spanish items is available from Kay Hoover at:

Philadelphia Department of Public Health
Division of Early Childhood, Youth and Women's Health
1101 Market Street, 9th Floor
Philadelphia, PA 19107
215-685-5225, Fax 215-685-5257

Videos in Languages other than English and Spanish:

Breast Is Best

Call Kay Hoover at 610-543-5995 for the address to order the video in the language of your interest: Bosnian, Catalan, Danish, Dutch, French, Finnish, German, Hungarian, Latvian, Norwegian, Russian, Swedish, Turkish, Urdu.

Breastfeeding: A Special Relationship,

24 minutes

Mary Rose Tully
1122 Vic Charles Drive
Raleigh, NC 27606
919-851-8816, Fax 919-852-0985
Language: Russian

17. Breastfeeding Slides

Best Beginnings Productions

6121 West 86th Terrace
Overland Parks, KS 66207-1530
913-649-0487
Email: spage@kumc.edu
10 "Lectures-to-Go", topics include clinical issues in breastfeeding, with lecture outline & bibliography for 10 lectures, prices vary depending on set, call for details.

The Breastfeeding Connection

Pat Bull RN, IBCLC & Jan Barger RN, IBCLC
754 Raintree, Naperville, IL 60540
630-420-2172
50 slides "Breastfeeding...A Precious Moment" for \$90 plus \$7 for postage

Bright Futures Lactation Resource Center

Linda Smith
6540 Cedarview Court
Dayton, OH 45459
800-667-8939
<http://www.bflrc.com>
12 slides on advantages of breastfeeding (all words) \$41

Linda Cahoon

Department of Family and Consumer Services
North Carolina State University
Box 7605
Raleigh, NC 27695-7605
919-515-9157, Fax 919-515-3483,
60 slides for \$180, In-Home Breastfeeding Support Program

Childbirth Graphics

WRS Group
PO Box 21207
Waco, TX 76702-1207
800-299-3366 fax: 888-977-7653
www.childbirthgraphics.com
34 slides of basics for breastfeeding classes for \$68
28 slides of flip chart drawings for \$36
42 slides of working and breastfeeding for \$70
16 slides "Feed the Baby How Often?" for \$12.95
16 slides of "Whose Idea Was This?" for \$12.95
57 slides of healthy newborns for \$79.95

Geddes Productions

PO Box 41761, Los Angeles, CA 90041-0761
323-344-8045 fax: 323-257-7209
<http://www.geddespro.com>
26 slides "Breastfeeding works for Cesareans too" for \$24
2 sets of 27 slides of drawings of breasts and nipples \$64.95 per set
12 slides of first attachment \$26.50 black and white, \$36 in color

Growing with Baby

1230 Marsh Street
San Luis Obispo, CA 93401
800-524-9554
www.growingwithbaby.com
Slides to match "Only the best for my baby: learning to breastfeed" curriculum, \$69.95
Feeding Cues Package, color slides, \$29.95

Hollister Incorporated

Ameda Breastfeeding Products

2000 Hollister Drive
Libertyville, IL 60048-3781
800-323-4060 or 877-992-6332
www.ameda.com
Call to inquire about slides of their products.

Kay Hoover, M Ed, IBCLC

613 Yale Ave.
Morton, PA 19070-1922
610-543-5995
khoover@icdc.com
320 color breastfeeding in-service slides for \$200 (no word slides, all photographs)

Lact-Aid International, Inc.

Jimmie Lynne Avery
PO Box 1066, Athens, TN 37371-1066
423-744-9090
www.lact-aid.com
Educational slides on breastfeeding. Call to inquire.

Lactation Consultant Services

Debi Bocar
11320 Shady Glen Road
Oklahoma City, OK 73162
405-722-2163 Fax: 405-722-2197
Email: dbocar@aol.com
About 400 slides for \$4 each. Write for catalog.

17. Breastfeeding Slides (continued):

The Lactation Institute

Chele Marmet
16430 Ventura Boulevard, Suite 303
Encino, CA 91436
818-995-1913 fax: 818-995-0634
www.lactationinstitute.org
Over 400 slides for \$3.25 to \$4.50 each depending
on the number ordered. Write for catalog.

Medela, Inc.

1101 Corporate Dr.
McHenry, IL 60050
800-435-8316 fax: 815-363-1246
www.medela.com
customer.service@medela.com
Call to inquire about slides of their products.

Teaching Aids at Low Cost

PO Box 49
St. Albans, Herts
AL1 5TX United Kingdom
44 (0) 1727-853869
www.talcuk.org
24 slides "Breastfeeding Problems" and how to
overcome them for about \$25

UNICEF House

photo@unicef.org
www.unicef.org
120 slides for \$47 of hazards of formula around the
world
UNICEF has many slides on breastfeeding from
around the world (Philippines, Brazil, Kenya,
Thailand, and more). Call for pricing.

WHO Publications Centre, USA

Geneva, Switzerland
011-41-22-7912111, fax: 011-41-22-7914857
www.who.ch
email: publications@who.ch
Promoting Breastfeeding in Health Facilities: A Short
Course for Administrators and Policy-Makers. A
notebook of instructional text including eight teaching
modules with 154 slides that are mostly graphs.
\$165

18. Breastfeeding Posters

Bailey Medical Engineering

2216 Sunset Drive
Los Osos, CA 93402
805-528-5781 or 800-413-3216, Fax 805-528-1461
www.baileymed.com
"We believe that breastfeeding is the first step toward healthier children and a better society."
11x17

Best Start, Inc.

4809 East Busch Blvd. Ste. 104
Tampa, FL 33617
800-277-4975 or 813-971-2119
fax: 813-971-2280
Busy Moms, Embarrassment, & Encouragement
\$2 each + 20% discount on all poster purchases
English/Spanish/Native American

Bright Futures Lactation Resource Center

Linda Smith
6540 Cedarview Court
Dayton, OH 45459
937-438-9458 or 888-235-7201
Fax 937-438-3229
<http://www.bflrc.com>
8 ½ x 11 (all words)

Hollister Incorporated

2000 Hollister Drive
Libertyville, IL 60048-3781
800-323-4060
"Breastfeeding: The Gift of Love" 18 x 24

Childbirth Graphics

WRS Group, Inc.
PO Box 21207
Waco, TX 76702-1207
800-299-3366 fax: 888-977-7653
www.childbirthgraphics.com
"Breastfeeding: A special gift only you can give your baby" \$19.95
"A Special Gift" \$15.95
"A Mother's Gift" 18x24", \$63 framed, \$21.95 for print only
"Nursing mother & child" & *"Breastfeeding baby"* \$65 framed, \$21.95 for print only

The HealthONE Alliance Lactation Program

4500 East 9th Avenue, Suite 320
Denver, CO 80220
Director: Marianne R. Neifert, M.D.
303-320-7081, Fax 303-320-7118
Commemorative poster, 22 x 28 black and white,
\$15

The Compleat Mother

Box 209
Minot, ND 58702
701-852-2822
E-mail jody@minot.com
www.compleatmother.com
Wide assortment of posters, \$15/15ct

INFACCT CANADA

Infant Feeding Action Coalition
6 Trinity Square
Toronto, Ontario M5G 1B1 Canada
416-595-9819 fax: 416-591-9355
www.infacctcanada.ca
"The only food group your baby needs."
"This union offers security, no dues, and great benefits."
"Free hookup with every delivery."
"A breastfeeding baby leaves fewer leftovers."
"Fast food outlets."
"Sometimes it's okay to suck up to the boss."
"For a healthy baby, please see attached."
"Table for two. No reservations."
"Will work for food."
"Kids eat free."
"Breastfeeding in public is not a crime."
"Don't think of it as a mother's right to breastfeed, think of it as a baby's right to eat."
And more...
Unlaminated = \$7 each (\$5 each if you buy 3+),
Laminated = \$12 each (\$10 each if you buy 3+)

Iowa State University

Extension Distribution Center
119 Printing and Publications Building
Ames, IA 50011-3171
515-294-5247 fax: 515-294-2945
"Breastfed Babies benefit the whole world." 17 x 24,
\$5

18. Breastfeeding Posters (continued):

La Leche League International

1400 N. Meacham Road
Schaumburg, IL 60173-4840
847-519-7730

"The Baby Friendly Hospital Initiative" 11 x 17, \$.60 each, 10/\$4, item #675

"Breastfeeding, A special gift" 22 x 37 \$32.95

Multilanguage benefits of breastfeeding, \$3

Medela multiracial posters, \$4 each or 4 for \$12

World Breastfeeding Week posters, \$2.50 each

Noodle Soup

4614 Prospect Avenue #328
Cleveland, OH 44103-4314
216-881-5151 or 800-795-9295
www.noodlesoup.com

"Breastfeeding: For all the right reasons" *"Dandole a su bebe el pecho"* 5 x 25, \$.30

"World Breastfeeding Week August 1-7" 15 x 20 for \$5, *"La Semana Mundial de Dar Pecho"* 18 x 20 for \$7

"Gift of Love" English/ Spanish, \$3.50

"Breastfeeding Babies are Healthier Babies"

English/Spanish, \$1-2

Breastfeeding news articles on posters, \$12/100

Medela, Inc.

1101 Corporate Dr.
McHenry, IL 60050
800-435-8316 fax: 815-363-1246
www.medela.com

customer.service@medela.com

www.medela.com

"Breastfeeding Management and Problem Solving"

Also: Breastfeeding posters depicting White, Black, Hispanic, or Asian moms

Missouri WIC Program

WIC Breastfeeding Coordinator
Missouri Department of Health
930 Wildwood
PO Box 570
Jefferson City, MO 65102
573-751-6204

"Breastfeed...Best from the Start...Bond from the Heart," \$10

International Association of Parents & Professionals for Safe Alternatives in Childbirth (NAPSAC)

Rt. 4, Box 646
Marble Hill, MO 63764
573-238-2010
www.napsac.org

"TRU-BREAST" 8 x 5, 100 for \$5.50

North Carolina Breastfeeding Coordinator

Nutrition Services Section
PO Box 10008
Raleigh, NC 27605-0008
919-733-2973 or 919-715-0645

"Your Baby's First Immunization: Breastfeeding," 11 x 17 *Breastfed Babies...Are Happy Grow So Well Smell So Good Let Mom Rest* 11 x 14 and 17 x 24

Philadelphia WIC, North, Inc.

North Wallace Building
215-978-6100
642 North Broad Street Ste 101
Philadelphia, PA 19130

"Breastfeeding is an Art 1992" 17 x 24

"Breastfeeding is Independence 1993"

"Breastfeeding is a Moving Experience 1994"

"Breastfeeding is Empowering 1995"

"Breastfeeding is a Community Responsibility 1996"

US Department of Agriculture

Jackie Rodriguez
Supplemental Food Program Division/WIC
Food and Nutrition Service
3101 Park Center Drive
Room 540
Alexandria, VA 22302-1500
703-305-2692

"Breastfed Babies Welcome Here" 11x 14 free

19. Breastfeeding Organizations

Local/Regional Breastfeeding Organizations
African-American Breastfeeding Alliance, Inc;
877-532-8535; aaba@att.net
LaLeche League of Greater Baltimore; 410-526-4285
LaLeche League of Washington, DC; 202-269-4444
LaLeche League of Virginia; 703-534-8548
Nursing Mothers Information Line of Delaware
302-733-0973
Provides phone numbers of LaLeche League Leaders and individuals who provide breastfeeding support in the areas.

Maryland WIC Program
201 West Preston Street
Baltimore, Maryland 21201
1-800-242-4WIC
Fax: 410-333-5243
WIC has breastfeeding counselors to work with mothers in clinics and hospitals. Lactation consultants may be available to assist breastfeeding mothers. Pumps and breastfeeding aids are also available.

National Breastfeeding Organizations
American Academy of Pediatrics
800-433-9016
www.aap.org
141 NW Point Blvd.
Elk Grove Village, IL 60009-0927
Laura Aird, Director of Community Health Services;
ext. 4729
Betty L. Crase, BA, IBCLC
Provisional Section of Breastfeeding
Breastfeeding Promotion and Physician Offices
Practice Program

Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN)

800-673-8499
2000 L. Street, N.W., #740
Washington, D.C. 20036
Fax: 202-728-0575
www.awhonn.org
Videotape seminars, position statement, *Journal of Obstetrics, Gynecologic and Neonatal Nursing*.

Baby-Friendly USA
508-888-8092
8 Jan Sebastian Way #22; Sandwich, MA 02563
Fax: 508-888-8050
info@babyfriendlyusa.org
www.babyfriendlyusa.org
Materials that support the Ten Steps to Successful Breastfeeding.

Best Start Social Marketing
913-649-0847
4809 E. Busch Blvd. #104; Tampa, FL 22617
Fax: 813-971-2280
beststart@beststartinc.org
Videos, pamphlets, posters, "New Life Magazine" for adolescents, TV PSA's, radio PSA's, outdoor advertisements, Physicians' Breastfeeding Support Kit, Health Care Providers' Breastfeeding Support Kit, 3-Step Counseling Strategy Training Module. Spanish and Native American materials available.

Breastfeeding National Network

1-800-TELL-YOU
Provides information in Spanish; Medela supplies (pumps, scales, bras, and accessories) and lactation consultants in your area.

Healthy Mothers Healthy Babies

703-836-6110
www.hmhb.org
121 N. Washington St. Suite 300
Alexandria, VA 22314

Human Lactation Center

203-259-5995
666 Sturgis Highway
Westport, CT 06880
Dedicated to international education and research on breastfeeding; researching effect of sexual abuse on women in childhood and breastfeeding.

19. Breastfeeding Organizations:

National Alliance for Breastfeeding Advocacy

Barbara Heiser, Co-founder & Director
410-995-3726
9684 Oak Hill Drive
Ellicott City, MD 21043
Marsha Walker, Co-Founder
781-893-3553
254 Conant Road
Weston, MA 02493-1756
Email: Marshalact@aol.com
Research, educational, and legal foundation.
Organization providing information on current legislation impacting breastfeeding; International Code for Advocacy; provide grant programs for pumps; provide home visit consultation, fees incurred in 15minute intervals on sliding scale; rent and sell pumps.

National Center for Education in Maternal and Child Health

703-524-7802
2000 15th Street, N., Suite 701
Arlington, VA 22201-2617
www.mccmch.org
Provides information services, educational materials, and technical assistance.

Study Group on Human Lactation and Breastfeeding

Providers Call 585-275-0088
Ruth Lawrence, MD, Project Director
University of Rochester Medical Center, Golisino Children's Hospital at Strong
601 Elmwood Avenue, Box 777
Rochester, NY 14642
Offers current information on drugs in lactation; gathers information on unusual maternal and infant problems.

United States National Breastfeeding Committee

508-888-8044
Center for Breastfeeding
Healthy Children 2000
8 Jan Sebastian Way, #13
Sandwich, MA 02563
Provide courses for lactation service providers.

International Breastfeeding Organizations

The Academy of Breastfeeding Medicine (ABM)

877-836-9947
191 Clarksville Rd.
Princeton Junction, NJ 08550
abm@bfmed.org
A professional organization created to improve physicians' breastfeeding knowledge and patient-education skills. ABM seeks to educate primary-care physicians about optimal breastfeeding practices and common problems so they can teach mothers how to begin, and successfully continue, breastfeeding. They hope to establish practice standards across all its represented medical specialties, and will encourage expanded breastfeeding education in medical schools and residencies as well. Any physician licensed to practice medicine in their jurisdiction, nationally or internationally, may join the ABM. Their newsletter is available for \$30/yr. to non-members.

Australian Breastfeeding Association

Lactation Resource Centre
61 3 9885 0855
PO Box 4000; Glen Iris
Victoria 3146; Australia
fax: 61 3 9885 0866
Irc@breastfeeding.asn.au
www.breastfeeding.asn.au
The Lactation Resource Centre holds research information, which is continually up-dated. We can provide database searches and photocopied journal articles on the subject of lactation. Our services can be accessed through an annual subscription or on a fee for service basis.

INFACT Canada (Infant Feeding Action Coalition)

416-595-9819
10 Trinity Square,
Toronto, Ontario CANADA M5G 1B1
resources@canadainfact.ca
www.infactcanada.ca
INFACT newsletter \$35/yr. Award winning breastfeeding posters and other promotional materials. Work with the International Code of Marketing of Breastmilk Substitutes.

19. Breastfeeding Organizations (continued):

Institute for Reproductive Health
202-687-1392 (LM 4/24 (2))
Victoria Jennings, Ph.D.
Georgetown University Medical Center
2115 Wisconsin Avenue, NW, 6th Floor, Suite 602
Washington, DC 20007
International Baby Food Action Network (IBFAN)
www.ibfan.org

Website provides several mailing addresses. IBFAN is a coalition of more than 150 citizen groups in 90 nations. IBFAN promotes better maternal and child health and nutrition through the protection and promotion of breastfeeding and the elimination of irresponsible marketing of breastmilk substitutes. IBFAN helped to develop the WHO/UNICEF International Code of Marketing of Breastmilk Substitutes and is determined to see marketing practices everywhere change accordingly.

International Board of Lactation Consultant Examiners (IBLCE)
703-560-7330
7309 Arlington Blvd. #300
Falls Church, VA 22042-3215
IBLCE administers lactation board exam; approve breastfeeding education program; and has current list of IBCLCs in the U.S.

International Lactation Consultant Association (ILCA)
919-787-5181
Elizabeth Stark
1500 Sunday Dr. Suite 102
Raleigh NC 27607
FAX 919-787-4916
ilca@erols.com
An organization for lactation consultants. Offers a yearly conference featuring internationally famous researchers, educators and clinicians. Also offers educational and professional resources and publishes a peer-reviewed quarterly, The Journal of Human Lactation.

La Leche League International, Inc. (LLL)
800-LA-LECHE (counseling information)
847-519-7730
P.O. Box 4079
Schaumburg, IL 60168-4079
1400 North Meacham Road
Schaumburg, IL 60173-4840
FAX 847-519-0035
www.lalecheleague.org
Email: llhq@llli.org
Volunteer group begun in 1956. Currently carries books; breastfeeding aids, devices and pumps; educational materials for professionals. Sponsors an annual Physicians Seminars in conjunction with the American Academy of Pediatrics; annually sponsors eight lactation consultant workshops. Operates a center for Breastfeeding Information. Services available through this center include: information on Breastfeeding Peer Counselor Programs; a network of legal support services; Medical Advisory Board for unusual medical situations; and reliable information on all breastfeeding topics. Sponsors local support groups worldwide.

Linkages
202-884-8000
Kim Winnard
FAX 202-884-8977
1825 Connecticut Ave NW
Washington, DC 20009
linkages@aed.org
www.linkagesproject.org
International program funding by US AID to promote breastfeeding worldwide. Technical assistance and training provided to organizations overseas.

19. Breastfeeding Organizations (Continued):

UNICEF (United Nations Children's Fund)

212-326-7000

212-326-7060

UNICEF House

3 United Nations Plaza

New York, NY 10017

www.unicef.org

Nutrition Section Program Division

212-824-6365

Publishes materials on worldwide breastfeeding promotion, protection, and support. Offers materials on the Baby Friendly Hospital Initiative, a global effort encouraging hospitals to create an environment conducive to breastfeeding; background on the Code of Marketing of Breast-milk Substitutes

Wellstart International

619-295-5192

Breastfeeding Help Line 619-295-5193

FAX 619-294-7787

4062 First Avenue

San Diego, CA 92103-2045

Educates medical and health care professions around the world and globally promotes healthy families through global promotion of breastfeeding. Wellstart has developed a curriculum for medical students.

Women's International Public Health Network

(WIPHN)

301-469-9210

Naomi Baumslag, MD, Pediatrician

7100 Oak Forest Lane

Bethesda, MD 20817

An organization formed to promote women's health, nutrition, and status worldwide; includes breastfeeding promotion, protection and support efforts. Publishes quarterly newsletter (\$20/year individual, \$45/year organization) for women working in public health and health related areas. Book *Mild, Money, and Madness: The Culture and Politics of Breastfeeding* available from Greenwood Publishers.

World Alliance for Breastfeeding Action (WABA)

PO Box 1200, 10850 Penang, Malaysia

origem@elogica.com.br

WABA Secretariat, Director Sarah Amin,

email: secr@waba.po.my (sent 4/24)

20. Breastfeeding Charts, Dolls, Models, History and Intake Forms

Childbirth Graphics
WRS Groups, Inc.
PO Box 21207
Waco, TX 76702-1207
800-299-3366 fax: 888-977-7653
www.childbirthgraphics.com
"Breastfeeding Basics" spiral bound chart,
bilingual (English/Spanish), \$55
"Breastfeeding Chart Collection" 33 full color charts,
bilingual (English/Spanish) \$69
Breastfeeding chart set (8), bilingual
(English/Spanish), \$91
Breastfeeding education models (dolls) \$44

Geddes Productions
PO Box 41761, Los Angeles, CA 90041-0761
323-344-8045 fax: 323-257-7209
www.geddespro.com
www.geddesproduction.com
Positioning overhead transparencies (12), \$26.50
Full color pocket flip charts (12 drawings), \$16.50

Lactation Institute
16430 Ventura Boulevard, Suite 303
Encino, CA 91436
818-995-1913 Fax: 818-995-0634
www.lactationinstitute.org
Write for catalog.

Noodle Soup
4614 Prospect Avenue #328
Cleveland, OH 44103
800-795-9295 or 216-881-5151
www.noodlesoup.com

Kay Hoover
613 Yale Ave.
Morton, PA 19070-1922
khoover@icdc.com
Diaper Diary, pad of 50 sheets for \$15 (1 pg.,
double-sided, color photos of the change in the
baby's diapers over the 1st wk. & places to record #
of feedings & diaper output in 1st wk.)
*The Link Between Infant's Oral Thrush and Nipple
and Breast Pain in Lactating Women* (4 pg.
monograph with colored photos) \$5/1, \$30/10,
\$50/25, \$100/100.

21. Drug Transfer in Breastmilk

Drug Information by Telephone:

The Lactation Center at the University of Rochester 585-275-0088



Thomas Hale, R.Ph., Ph.D. – visit website: <http://neonatal.ama.ttuhscc.edu/lact/>
Information is available for health care professionals, not consumers.
806-354-5528



Brigham and Women's Hospital 617-732-5500
Boston, Massachusetts

Ask for the clinical pharmacologist, during business hours.



Drug Information Resources:

American Academy of Pediatrics Policy Statement: The Transfer of Drugs and other Chemicals into Human Milk. (2001, October), 3, 776-789. Retrieved May 16, 2003, from <http://www.aap.org/policy/0063.html>.

Briggs, (2002). Drugs in Pregnancy and Lactation. (6th Ed.) Briggs, Freeman and Yaffee.

Hale, T. (2004). Medications and Mothers' Milk. (11th Ed).

Lawrence, R. (1999). Breastfeeding: The Guide for the Medical Profession (4th Ed.) Contains a summary table of data on drugs and breast milk, p. 744-867.

22. Common Questions Asked By Healthcare Professionals

Birth Control and Breastfeeding

Natural family planning and barrier methods have no effect on lactation. If a woman wants a hormonal birth control while breastfeeding, the combination pills with estrogen and progestin should be avoided because they cut back on the milk supply. If using the progestin only methods (mini-pills, injectables, or implants), it is best to wait six weeks to ensure an adequate milk supply, and monitor the baby carefully for adequate weight gain after beginning the use of hormonal birth control.

When a baby is under six months, is totally breastfeeding (i.e. not getting anything else to eat), has all of his sucking needs met at the breast (i.e. no pacifier or thumb/finger sucking), is waking to breastfeed during the night, and the mother has not had a period, breastfeeding affords 98% protection from pregnancy. Breastfeeding could be used in conjunction with another form of birth control to make both more effective.

Contra-indications for Breastfeeding

When a mother is HIV positive, uses street drugs, or is an alcoholic.
When a baby has galactosemia.

Immunizations and Breastfeeding

“A patient who has been identified as susceptible to rubella virus infection should receive the rubella vaccine in the postpartum period. Rubella vaccine can be administered before discharge, even if the patient is breastfeeding.”¹

Hepatitis B vaccine and Flu vaccine may be given to a breastfeeding woman. The smallpox vaccine should not be given to any woman with a child under one year of age; however, the smallpox vaccine is currently given to the general population.

Jaundice and Breastfeeding

“A review of available follow-up data for apparently healthy term infants whose serum bilirubin concentrations were as high as 25 mg/dl showed no apparent ill effects for these concentrations.”¹

“Some evidence indicates that frequent breastfeeding (8-10) times per 24 hours) may reduce the incidence of hyperbilirubinemia.”¹

“Supplementing nursing with water or dextrose-water will not lower serum bilirubin levels in jaundiced, healthy, breastfeeding infants.”¹

“When an indirect serum bilirubin concentration is elevated by some pathologic cause, there is no reason to discontinue breastfeeding.”¹

22. Common Questions Asked By Healthcare Professionals (continued):

“In the absence of dehydration, routine supplementation (with dextrose-water) of infants receiving phototherapy is not indicated.”

American Academy of Pediatrics and American College of Obstetricians and Gynecologists. Guidelines for Perinatal Care (4th Edition). Elk Grove Village, IL: AAP, 151, 183-188, 1997.

Postpone Putting Baby to Breast

Group A streptococcus (mother may breastfeed when over acute stage and after 24 hr. treatment)

active tuberculosis (must wait until mother's treatment is established, at least two weeks)

active hepatitis B (give baby HBIG and hepatitis B vaccine) Baby may go to breast immediately after birth before given the immunity shots, but they should be given soon.

chronic carrier of hepatitis (ask for infectious disease opinion)

active herpes simplex lesions in the nipple area (may breastfeed after lesions are healed)

chickenpox “When maternal chickenpox occurs within 6 days of delivery or immediately postpartum and no lesions are present in the neonate, mother and infant should be isolated separately. Only half the infants born to mothers who developed the disease 7 to 15 days before delivery will develop the disease. They should receive zoster immune globulin (ZIG) ... If no lesions develop by the time the mother is noninfectious, the infant and the mother may be sent home together. When the mother and infant can be together, the child can be breastfed.”

RA Lawrence: Breastfeeding: A Guide for the Medical Profession (5th Edition). Philadelphia: Mosby, 1999, p. 584-588.

RA Lawrence: A Review of the Medical Benefits and Contraindications to Breastfeeding in the United States, 1997.

Red Flag when Breastfeeding

Women in the following situations **sometimes** do not produce a full milk supply; therefore, their babies need to be carefully followed with frequent weight checks:

- a woman who has had infertility problems
- a woman who does not experience breast changes during pregnancy and during the first postpartum week
- a woman who has had breast surgery
- a woman who has asymmetrical breasts
- a woman who is using hormonal birth control

22. Common Questions Asked By Healthcare Professionals (continued):

Surgery and Breastfeeding

- Babies and children may breastfeed until three hours before surgery.
- After a woman has had surgery she may breastfeed when she is alert enough to hold the baby. At that point enough of the sedative is out of her body that it is safe to breastfeed.

Yes, it is all right to breastfeed when

- a woman has a breast infection
- a woman is pregnant
- a woman has twins, triplets, or quadruplets
- a woman is a teenager
- a woman needs to have a mammogram
- a woman needs to have breast surgery
- a woman has had extensive breast surgery
 - the baby may need to be supplemented at breast
- a woman is adopting a baby
 - the baby may need to be supplemented at breast
- a baby is jaundiced
- a baby has diarrhea
- a baby is over two years
- a baby has PKU
 - Under supervision the baby can breastfeed along with being fed a Phenylalanine-free formula

23-A. Summary Of The International Code Of Marketing Of Breastmilk Substitutes

1. There should be no advertising of breastmilk substitutes or other form of promotion to the general public.
2. Manufacturers and distributors should not provide, directly or indirectly, to pregnant women, mother or members of their families, samples of their products, including discount coupons.
3. No promotion of products in health care facilities.
4. No sales representatives to advise mothers.
5. No gifts or personal samples to health workers.
6. No words or pictures idealizing artificial feeding, including pictures of infants on the labels of the products.
7. Information to health workers should be scientific and factual.
8. All information on artificial infant feeding, including the labels, should explain the benefits of breastfeeding, and the costs and hazards associated with artificial feeding.
9. Unsuitable products, such as sweetened condensed milk, should not be promoted for babies.
10. All products should be of a high quality and take account of the climatic and storage conditions of the country where they are used.

23-B. Summary Of The International Code Of Marketing Of Breastmilk Substitutes

The International Code of Marketing of Breast-milk Substitutes: A Common Review and Evaluation Framework

a document containing the Code, questionnaires, and a discussion of the issues

WHO Publications Centre, USA
49 Sheridan Avenue
Albany, NY 12210
518-436-9686

24. Children's Books Showing Breastfeeding

101 Things to Do with a Baby, by Jan Ormerod. Full-color illustrations by the author. 32 pp. Lothrop, Lee, & Shepard Books, 1984.

Babies: Understanding Conception, Birth, and the First Years, by Robyn Gee. Full-color illus. by Sue Stitt and others. 48 pp. Usborne Publishing, Ltd., 1985.

Babies, Babies, Babies, by Tessa Dahl. 1990.

Question and answer format comparing mammal and non-mammal. Milk from breast or bottle.

The Baby, by Monica Greenfield. Full color illus. by Jan Spivey Gilchrist. 14 pp. Harper Festival, 1994.

A Baby Just Like Me, by Susan Winter. Full-color illus. by the author. 32 pp. Dorling Kindersley, American edition, 1994.

Baby Whales Drink Milk.

A science type of book that talks about how humans feed their babies milk, just like whales and other mammals.

The Baby's Catalogue, by Janet and Allan Ahlberg. Full color illus. by the authors. 32 pp. Little Brown and Company, 1982, 1986. British family.

Baby's Day, by Sarah Pooley. Published by Peter Bedrick Books in New York.

ISBN: 0-87226-443-2.

It shows various things the baby does through the day with simple words under each picture. On the last page, as the baby is getting ready for bed, the child is nursed with "milk" written under the picture. There are not bottles or pacifiers in this book. The child does drink out of a sippy cup at meals (typical of an older baby).

Baby's First Year, by Debbie MacKinnon. Color photographs by Anthea Sieveking. 26 pp. Barron's Educational Series, 1993.

The Bare Naked Book, by Kathy Stinson. Full-color illus. by Heather Collins. 32 pp. Annick Press, Ltd., 1986.

24. Children's Books Showing Breastfeeding (continued):

- Becoming, by Eleanora Faison. Illus. with line drawings by Cecelia Ercin. 30 pp. Eleanora Patterson Press, 1976.
- The Best Gifts, by Marsha Forchuk Skrypuch, illus by Halina Below, 32 pp. Whiteside Publishers, Markham, Ontario, Canada, 1998
- Betsy's Baby Brother, by Gunilla Wolde. Full-color illus. by the author. 24 pp. Random House, 1975, 1990.
- Big Like Me, by Anna Grossnickle Hines. Full-color illus. by the author. 32 pp. Greenwillow Books, 1989.
- Breasts, by Genichiro Yagyu, Miller Book Publishers, 1999
- A Child Is Born, by Lennart Nilsson. Dell, 1990.
Text is for adults, but the pictures of developing fetuses and new babies are a good introduction for children.
- Contemplating Your Bellybutton, by Jun Nanao. Kane/Miller.
Breastfeeding is portrayed as a natural part of a baby's life.
- The Cuddlers, by Stacy Towle Morgan, LLLI.
"Captures the warmth and love a family experiences when children are drawn into the security of their parents' bed." (LLI).
- Daniel's Dog, by Jo Ellen Bogart. Scholastic Canada.
Breastfeeding mother pictured in the course of the story.
- Feeding Babies, by Chiyoko Nakatani. Full-color illus. 24 pp., Puffin Books, ISBN: 0-14-050-381-1.
A collection of small babies feeding, e.g., a giraffe, hippo, etc., ending with a human baby breastfeeding.
- The First Family, by Michael Twinn. Full-color illus. by Annie Kubler. 24 pp. Child's Play (International) Ltd., 1994.
- Gerald the Third, by Faye Early Young. LLLI, 1977.
- Happy Birth Day! by Robie H. Harris, illustrations by Michael Emberly, Candlewick Press, 1996
It is written as if a mother is telling a child about the day they were born.
- Honey Paw and Lightfoot, by Jonathan London.
About a bear and her cubs.
- How Babies Are Made, by Andrew C. Andry and Steve Schepp. Illus. with full color paper cuttings by Blake Hampton. 84 pp. Little, Brown & Co., 1968. Revised 1979.
- How I Was Born, by Marie Wabbes. Full-color illus. by the author. 26 pp. Tamburine Books, 1991.
- How Was I Born? by Lennart Nilsson and Lena Katrina Swanberg. Illus. with full-color photographs by Lennart Nilsson. 80 pp. Delacorte Press, English language edition, 1994. Originally published in Sweden 1993.

24. Children's Books Showing Breastfeeding (continued):

- How You Were Born, by Joanne Cole. Illus. with full color photographs by Margaret Miller. 48 pp. Morrow Junior Books, 1993.
- I Am a Little Giraffe I Am a Little Hedgehog I Am a Little Kangaroo
I Am a Little Pig I Am a Little Whale
- All five above: Francois Crozat, Barron's Educational Series, 1995-1997 All these are narrated by the baby animal, and all have at least one mention of nursing. In I Am a Little Pig, the mommy pig has more babies than nipples, and the baby pig that tells the story is bottle-fed by the farmer's daughter, while all its siblings nurse.
- If My Mom Were a Platypus: Animal Babies and Their Mothers. By Dia L. Michels, Platypus Media, Washington DC, 2001 (www.PlatypusMedia.com)
- I Love My Mommy Because, Laurel Porter-Gaylord, Dutton Children's Books, NY, 1991.
Has a few human mother/child pairs, but mostly animals. It has all the reasons the child loves the mother. The illustration for the page "because she feeds me" is a nursing sheep and lamb.
- It's My Birthday, by Shigeo Watanabe, Philomel Books, 1988.
A popular series about a bear and his friends continues with Bear's fourth birthday. A photo album is his gift from his grandparents, with photos going back to before Bear was born. One photo is of mother bear nursing the newborn baby bear (it's a big brown bear in pink pajamas with a pink nipple hanging out!)
- The Last Puppy, by Frank Asch. Simon and Schuster, 1980.
- Look what I see! Where can I be? In the neighborhood. By Dia Michels, Platypus Media, Washington DC 2001 (www.PlatypusMedia.com)
- Maggie's Weaning, by Mary Deutschbein. Illus. with black-and-white photographs by the author. 24 pp. Moon Gold Press, 1993.
"A delightful, child's-eye view of the nursing experience as seen through the eyes of brand-new big sister Maggie." (LLL).
- Mama, Daddy, Baby and Me, by Lisa Gewing. Illus. in black and white and full color by Donna Larimer. 30 pp. Spirit Press, 1989.
- Mama's Bed, by Jo Ellen Bogart and Sylvie Daigneault. Scholastic Books.
- Michele, the Nursing Toddler, LLLI No. 253
- Mommy Breastfeeds our Baby, Teresa Carroll. color illus. by Linda Gray. 22 pp. NuBaby, Tuscaloosa, AL, 1993.
"Helps children to understand breastfeeding as a natural and special way to feed the new baby." (LLL).
- My Mama Needs Me, by Mildred Pitts Walter. Full-color illus. by Pat Cummings. 32 pp. Lothrop, Lee & Shepard Books, 1983.
- The New Baby, by Fred Rogers. Full-color photographs by Jim Judkis. 26 pp. G.P. Putnam's Sons, 1985.

24. Children's Books Showing Breastfeeding (continued):

- Oh, Baby! by Sara Stein. Illus. with full-color photographs by Holly Anne Shelowitz 43 pp. Walker & Co. 1993.
Color photos of birth to one year. Multi-cultural. No Bottles. Caption for nursing picture, "No one has to teach them how to drink!"
- Once upon a Time, by Gwenda Turner. Full-color illus. by the author. 28 pp. Viking, 1990.
- One Round Moon and a Star for Me, by Ingrid Mennen. Full color illus. by Niki Daly. 32 pp. Orchard Books, 1994. Set in rural south Africa.
- Only the Cat Saw, by Ashley Wolff. Full-color illus. by the author. Walker and Company, 1996.
Nursing is incidental to story of a cat who sees all the activities of a family. Nursing Mom and illustration of a person on a toilet got this book censored in some places.
- Our New Baby, by Frank Endersby. Full-color illus. by the author. 12 pp. Child's Play (Intl) Ltd., 1985.
- Over the Green Hills, Rachel Isadora, Greenwillow Books, 1992.
Set in South Africa. Nursing is incidental to story--younger sister is fed several times during story.
Good example of baby wearing (toddler really) and extended nursing.
- The Pirate Queen, by Emily Arnold McNully.
A book for older children or read-aloud book, with a wonderful illustration of a nursing mother.
- Rosie's Babies, by Martin Wadell and Penny Dale. Candlewick Press.
- The Same but Different, by Tessa Dahl. Viking Kestrel, 1988.
- Silent Night, illus. by Susan Jeffers. Published in the United States by E.P. Dutton.
ISBN 0-525-44431-9.
Published simultaneously in Canada by Fitzhenry & Whiteside Limited, Toronto, A Unicornpaperback 1988.
The words are those of the traditional Christmas carol. It depicts Mary discreetly breastfeeding baby Jesus.
- See How You Grow: A Lift-the-Flap Body Book, by Patricia Pearse. Full-color illustrations by Edwina Riddell. 32 pp. Barron's Educational Series, Inc., U.S. Edition, 1988.
- The Story of Christmas: Words from the Gospels of Matthew and Luke, illus. by Jane Ray. 24 pp. U.S. edition: Dutton Children's Books, 1991. Originally published in 1991 in Great Britain by Orchard Books, the Watts Group, 96 Leonard Street, London EC2A 4RH.
Spanish edition available. ISBN 0-525-44768-7
This is the story of the Nativity straight out of the bible. The illustrations are incredible! All the colors are so vivid and the metallic gold accents make the pictures just dazzling.
- A Teeny Tiny Baby, by Amy Schwartz. Full-color illus. by the author. 32 pp. Orchard Books, 1994.
It's "told by" the newborn ("I am a teeny tiny baby. Mom and Dad cater to my every need.") and one sequence shows the mother nursing in many different locations in the house, ending up with a scene of her nursing in the middle of the night with all the lights off but where she is.

24. Children's Books Showing Breastfeeding (continued):

- That New Baby: An Open Family Book for Parents and Children Together, by Sara Bonnett Stein. Illus. with black-and-white photographs by Dick Frank. 48 pp. Walker and Co., 1974.
- That's My Baby? by Andrea Wayne Von Konigslow. Full-color illus. by the author. 24 pp. Annick Press, Ltd., 1986.
- Topsy and Tim and the New Baby, by Jean and Gareth Adamson. Full-color illus., 24 pp. Blackie Childrens Books, ISBN 0=216-93136-3. Topsy and Tim's friend Tony has a new baby brother. Topsy and Tim are keen to help out. Illustration of Tony's mother feeding the baby.
- We Have A Baby, by Cathryn Falwell. Full-color illus. by the author. Clarion Books, 1993. Shows a family with a new baby in a very nurturing way. Each page is "a baby to xxx" (hold, bathe, love, feed, etc.)--the "feed" page shows the mom nursing the baby while snuggling with the older child.
- We Like to Nurse, by Chia Martin. Full-color illus. by Shukyo Lin Rainey. 30 pp. Hohm Press, 1995. "Presents breastfeeding as a natural part of life for many different kinds of animals" (LLL).
- Welcome, Little Baby, by Aiki. Full color illustrations by the author. 24 pp. William Morrow, 1987.
- Welcoming Babies, by Margy Burns Knight. Full-color illus. by Anne Sibley O'Brien. 38 pp. Tilbury House, 1994. A wonderful multicultural book for children about different traditions around the birth of new babies. Depicts twins, a baby in an incubator, and an adopted baby. It does show a father giving a bottle to a new baby with no mention of the mother, so perhaps he is a single father. There is a lovely drawing of a mom sitting of the ground nursing her baby (in Maine) while the dad and older sibling dig a hole to plant a tree for the new baby.
- When I Was a Baby, by Catherine Anholt. Joy Street Books, Boston, 1989.
- When You Were a Baby, by Deborah Shaw Lewis and Gregg Lewis. Color photographs by the authors. Design and hand tinting by Gary Gnidovic. 48 pp. Peachtree Publishers, 1995.
- Where Did I Come From? The Facts of Life without any Nonsense and with Illustrations, by Peter Mayle. Full-color illus. by Arthur Robins. 46 pp. Carol Publishing Group, 1973.
- Will There Be a Lap for Me? by Dorothy Corey. Full-color illus. by Nancy Poydar. 24 pp. Albert Whitman & Co., 1992. Kyle misses his time on mother's lap while she is pregnant and is happy when the birth of his baby brother makes her lap available again. African-American family.
- Helping Mommy Breastfeed by Janis Wood Catano pp. 15 International Childbirth Education Association, 1988 www.icea.org 800-624-4934 952-854-8660
- Breastfeeding Is Special Amamantar es Especial, 1999 Gateway Maternal and Child Health Consortium, Inc., 201 Lyons Avenue, Floor G-3, Newark, NJ 07112 973-926-7353 \$1.00 each

24. Children's Books Showing Breastfeeding (continued):

If you know of other children's books that present breastfeeding in a positive manner, whether nursing is the book's topic or is incidental to the story, please e-mail Sue Ann Kendall (sak@prairienet.org) or Amy Robison (arobison@prairienet.org). We would also love additional information for books for which we don't have authors or publication data, and original annotations briefly describing the content of any of these books (many of our previous annotations were abridged from copy written materials, so we had to remove them).

Thanks to the following for contributing to the list, which was originally compiled by Amy F. Robison and edited by Sue Ann Kendall: Anne Altshuler, Sarah Augustine, Katherine Dettwyler, Elizabeth Gene, Cheryl Gowing, Theresa Gutsch, Jessica Hazlewood, Beth Hilleke, Lulu Huber, Jill Levien, Miriam London-Hinman, Kathryn Oliver-Garnett, Orhan Orgun, Cynthia D. Payne, Aimee C. Robbins, Sue Rericha, Sara Solnick, and Lori Thompson.

25. Breastfeeding and Maryland Law

Breastfeeding Legislation in Maryland

5/22/03

Maryland became the first state to provide an exemption from sales tax laws for breastfeeding accessories, such as pumps, shields, and other items that are used by breastfeeding mothers. This includes pumps, kits, shells, shields, SNS, feeding tubes, breast milk storage bags, finger feeders, and purified lanolin. In 2003 Maryland passed legislation regarding breastfeeding in public. The preamble, not reproduced here, recites the advantages of breastfeeding.

Health-General

Md. Code Ann §11-211

2001 Md. ALS 137; Md. Laws 137; 2001 Md. Chap. 137; Md. SB 252

- (a) A mother may breast-feed her child in any public or private location in which the mother and child are authorized to be
- (b) A person may not restrict or limit the right of a mother to breast-feed her child.

Health-General

Md. Code §20-801

SB 223.Chap. 369

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26. A Review of Medical Benefits and Contraindications- (Attachment)

MATERNAL & CHILD HEALTH
Technical Information Bulletin

**A Review of the
Medical Benefits
and Contraindications
to Breastfeeding in
the United States**

Ruth A. Lawrence, M.D.

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National Center for Education in Maternal and Child Health
2000 15th Street, North, Suite 701, Arlington, VA 22201-2617
(703) 524-7802
(703) 524-9335 fax
Internet: info@ncemch.org
World Wide Web: <http://www.ncemch.org>

Single copies of this publication are available at no cost from:

National Maternal and Child Health Clearinghouse
2070 Chain Bridge Road, Suite 450
Vienna, VA 22182-2536
(703) 356-1964
(703) 821-2098 fax

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Preface

In its report *Breastfeeding: WIC's Efforts to Promote Breastfeeding Have Increased* (1993), the U.S. General Accounting Office (GAO) recommended that the U.S. Department of Agriculture (USDA) and the U.S. Department of Health and Human Services (DHHS) develop written policies defining the conditions that would contraindicate breastfeeding and determining how and when to communicate this information to all pregnant and breastfeeding participants of the Special Supplemental Nutrition Program for Women, Infants and Children (WIC). The Maternal and Child Health Bureau, DHHS, and WIC, USDA, developed a plan to respond to GAO's recommendation. In late 1994, MCHB awarded a contract to Dr. Ruth Lawrence, a nationally recognized expert in the area of breastfeeding, to develop a policy document on the medical contraindications of breastfeeding. The policy document was reviewed by other national experts in the field of infectious diseases, environmental toxins, acute and chronic diseases, and metabolic disorders. In July 1996, the policy document was submitted to GAO to assist states in developing policies. To ensure widespread dissemination, the document has been prepared as a technical information bulletin (TIB) for distribution to DHHS and USDA regional offices, state and local health departments, WIC state and local agencies, and other interested organizations and health care providers. USDA is encouraging WIC state agencies to develop policies regarding contraindications to breastfeeding that take into consideration the information presented in this document and that are consistent with the policies of their respective state health departments.

Special thanks go to Ms. Katrina Holt, National Center for Education in Maternal and Child Health (NCEMCH), Ms. Gerry Howell, Special Supplemental Nutrition Program for Women, Infants and Children (WIC), and Ms. Denise Sofka, Maternal and Child Health Bureau (MCHB), who were instrumental in providing guidance in the preparation of this

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Benefits and Risks

Benefits

In any statement about breastfeeding and breastmilk (human milk), it is important first to establish breastmilk's distinct and irreplaceable value to the human infant. Breastmilk is more than just good nutrition. Human breastmilk is specific for the needs of the human infant just as the milk of thousands of other mammalian species is specifically designed for their offspring. The unique composition of breastmilk provides the ideal nutrients for human brain growth in the first year of life. Cholesterol, desoxyhexanoic acid, and taurine are particularly important. Cholesterol is part of the fat globule membrane and is present in roughly equal amounts in both cow milk and breastmilk. Maternal dietary intake of cholesterol has no impact on breastmilk cholesterol content. The cholesterol in cow milk, however, has been removed in infant formulas. These elements are readily available from breastmilk, and the essential nutrients in breastmilk are readily transported into the infant's bloodstream. The

bioavailability of essential nutrients (including the microminerals) means that there is great efficiency in digestion and absorption. Comparison of the biochemical percentages of breastmilk and infant formula fails to reflect the bioavailability and utilization of constituents in breastmilk compared to modified cow milk (from which only a small fraction of some nutrients is absorbed).¹

The presence of living leukocytes, specific antibodies, and other antimicrobial factors protects the breastfed infant against many common infections. Protection against gastrointestinal infections is well documented.¹ Protection against infections of the upper and lower respiratory system and the urinary tract is less recognized, although those infections lead to more emergency room visits, hospitalizations, treatments with antibiotics, and health care costs for the infant who is not breastfed.^{2,3}

The incidence of acute lower respiratory infections in infants has been evaluated in a number of studies examining the relationship between respiratory infections and breastfeeding or formula feeding in these infants.⁴⁻⁶ These studies confirm that infants who are breastfed are less likely to be hospitalized for respiratory infection, and, if hospitalized, are less seriously ill. In a study of infant deaths from infectious disease in Brazil, the risk of death from diarrhea was 14 times more frequent in the formula-fed infant and the risk of death from respiratory illness was 4 times more frequent.⁶ The association of wheezing and allergy in relation to infant feeding patterns has also shown a significant advantage to breastfeeding. In a report from a seven-year prospective study in South Wales, the advantage of breastfeeding persisted to the age of seven years in non-atopics, while in at-risk infants who were breastfed the risk of wheezing was 50 percent lower (after accounting for employment status, passive smoking, and overcrowding).⁷ Breastfeeding is thought to confer long-term protection against respiratory infection as well, according to these authors.

For decades, growth in infancy had been measured according to data collected on infants who were exclusively formula-fed, until the publication of data on the growth curves of infants who were exclusively breastfed.⁸ The physiologic growth curves of breastfed infants show a pattern similar to that of formula-fed infants at the 50th percentile, with significantly few breastfed infants in the 90th percentile. This is most evident in the examination of the z scores, which indicate that formula-fed infants are heavier compared to breastfed infants.⁹

Upper and lower respiratory tract infections have been evaluated in case-control studies, cohort-based studies, and mortality studies in both clinic and hospitalized children in many countries of the developed world.^{1-3,10,11} The results all show clearly that breastfeeding has a protective effect, especially in the first six months of life. A randomized controlled trial indicated that withholding cow milk and giving soy milk provided no such protective effect.⁷ The incidence of acute otitis media in formula-fed infants is dramatically higher than in breastfed infants,^{12,13} not only because of the protective constituents of human milk but also because of the process of suckling at the breast, which protects the inner ear.¹⁴ When an infant bottlefeeds, the eustachian tube does not close, and formula and secretions are regurgitated up the tubes. Child care exposure increases the risk of otitis media, and bottlefeeding amplifies this risk.¹⁴

In addition to the protection provided by breastfeeding against the presence of acute infections, epidemiologic studies have revealed a reduced incidence of childhood lymphoma,¹¹ childhood-onset insulin-dependent diabetes,¹⁵ and Crohn's disease¹⁶ in infants who have been exclusively breastfed for at least four months, compared to infants who have been fed infant formula. In addition, breastfed infants at high risk for developing allergic symptoms such as eczema and asthma by two years of age show a reduced incidence and severity of symptoms in early

life.¹⁷ Some studies suggest the protective effect continues through childhood.¹⁷⁻²⁰

In addition to clinically proven medical benefits, breastfeeding empowers a woman to do something special for her infant. The relationship of a mother with her suckling infant is considered to be the strongest of human bonds. Holding the infant to the mother's breast to provide total nutrition and nurturing creates an even more profound and psychological experience than carrying the fetus in utero.

In studies of young women enrolled in the WIC in Kentucky who were randomly assigned to breastfeed or not to breastfeed and who were provided with a counselor/support person throughout the first year postpartum, the young women who were randomized to breastfeed changed their behavior.^{21,22} They developed self-esteem and assertiveness, became more outgoing, and interacted more maturely with their infants than did the women assigned to formula feeding. The women who breastfed turned their lives around by completing school, obtaining employment, and providing for their infants.

Children who have been breastfed were noted by Newton²³ to be more mature, secure, and assertive, and they progressed further on the developmental scale than non-breastfed children. More recently, studies by Lucas²⁴ and other investigators²⁵ have found that premature infants who received breastmilk provided by tube feeding were more advanced developmentally at 18 months and at 7 to 8 years of age than those of comparable gestational age and birthweight who had received formula by tube. Such observations suggest that breastmilk has a significant impact on the growth of the central nervous system. This is further supported by studies of visual activity in premature infants who were fed breastmilk compared to those who were fed infant formula.²⁶ When similar studies were performed in term infants, visual acuity developed more rapidly in the breastfed infants.²⁷ Even when docosahexaenoic acid (DHA) was added to

formula, the performance by the breastfed infants was still better.²⁸

Nourishment with breastmilk is a combination event, in which nutrient-to-nutrient interaction is significant. The process of mixing isolated single nutrients in formula does not guarantee the nutrient or non-nutrient benefits that result from breastfeeding. The composition of human milk is a delicate balance of macronutrients and micronutrients, each in the proper proportion to enhance absorption. Ligands bind to some micronutrients to enhance their absorption. Enzymes also contribute to the digestion and absorption of all nutrients.¹ An excellent example of balance is the action of lactoferrin, which binds iron to make it unavailable for *E. coli* bacterium (which is dependent upon iron for growth). When the iron is bound, *E. coli* cannot flourish and the normal flora of the newborn gut, *Lactobacillus bifidus*, can thrive. In addition, the small amount of iron in human milk is almost totally absorbed whereas only about 10 percent of the iron in formula is absorbed by the infant. Examples of multiple functions of proteins in human milk include preventing infection, preventing inflammation, promoting growth, transporting microminerals, catalyzing reactions, and synthesizing nutrients.²⁹

Risk/Benefit Ratio

Breastfeeding may provide the mother with several benefits, including reduced risk of ovarian cancer and premenopausal breast cancer.³⁰⁻³² Women who breastfeed return to prepregnancy state more promptly than women who do not, and they have a lower incidence of obesity in later life.^{29,33} The benefits of breastfeeding are so strong and compelling that very few situations definitively contraindicate breastfeeding. The decision to breastfeed in the presence of a possible contraindication should be made on an individual basis, considering the risk of the complication to the infant and mother versus the tremendous benefits of breastfeeding. The benefits of being breastfed are greater for the

infant born in poverty where crowding, poor environment, and higher infection rates prevail. For example, in developing countries, the death rate from diarrhea and other infections in the first year of life is 50 percent for infants who are not breastfed. Thus, although some studies suggest that breastfeeding when the mother is HIV-positive increases the infant's risk of HIV, at this time, breastfeeding under these circumstances is still recommended in developing countries.¹⁰

There is general agreement that a woman's increasing number of pregnancies, increasing length of oral contraceptive use, and increasing duration of lactation are protective against ovarian cancer.³⁴ When the relationship between lactation and epithelial ovarian cancer was studied from a multinational database, short-term lactation was as effective as long-term lactation in decreasing the incidence of ovarian cancer in developed countries where ovulation suppression may be less prolonged in relation to lactation.³⁵ In a study of African-American women, who are known to have a lower incidence of ovarian cancer, breastfeeding for six months or longer as well as four or more pregnancies and oral contraceptive use had an effect in further reducing the incidence of ovarian cancer.³⁶

When researchers controlled for other variables such as age and parity, a reduced risk of breast cancer among premenopausal women who have lactated was reported in a study of over 5,000 cases in the United States.³⁷ The longer the lactation, the greater the protection. A population-based case-control study of 1,211 cases failed to show such a relationship when duration of breastfeeding was less than 30 weeks. However, the study showed that the younger the woman and the longer the duration of breastfeeding, the greater the protective effect.³⁸

The risk of osteoporosis in later life is greatest for women who have never borne infants, somewhat less for those who have borne infants, and measurably less for those who have borne and breastfed infants.³⁹ The bone

mineral loss experienced during pregnancy and lactation is temporary. Bone mineral density returns to normal following pregnancy and even following extended lactation when mineral density may exceed the original base line.⁴⁰ Serum calcium and phosphorus concentrations are greater in lactating than in nonlactating women. Lactation stimulates increases in fractional calcium absorption and serum calcitriol most markedly after weaning.⁴¹ Postweaning concentrations of parathyroid hormone are significantly higher than in other stages and urinary calcium is significantly lower.⁴²

Whenever the clinician is confronted by a situation that might suggest a conflict in encouraging breastfeeding, the theoretical risk should be measured against the projected benefits of breastfeeding. The discussion that follows is relevant only when the risk/benefit ratio is considered for individual cases.

Risks Associated with Breastfeeding

There are no nutritional contraindications to breastfeeding infants unless they have special health needs. Infants with intestinal lactase deficiency, galactosemia, or phenylketonuria (PKU) require special diets that reduce the intake of lactose, galactose, or phenylalanine, respectively. Infants with galactosemia require total artificial specific lactose-free formula; infants with PKU may be partially breastfed at the discretion of the physician.^{1,43,44} Because of the low level of phenylalanine in breastmilk, the breastfed infant may be given a high proportion of breastmilk and require very little phenylalanine-free formula. The formula-fed infant can tolerate very little regular formula in addition to the phenylalanine-free milk to maintain blood levels of phenylalanine between 5 and 10 milligrams per deciliter. All infants need some phenylalanine in their diet.

Maternal Diet

Breastfeeding is recommended for all infants in the United States under ordinary

circumstances, even if the maternal diet is not perfect.²⁹ The Institute of Medicine's Subcommittee on Nutrition During Lactation was impressed by the strong evidence that mothers are able "to produce milk of sufficient quantity and quality to support growth and promote the health of infants."²⁹ Studies reporting volume of milk produced relate the variability to the demand or consumption by the infant and not the dietary intake of the mother.⁴⁵ It is known that maternal intake of excess fluids does not increase milk production and may even decrease it.⁴⁶

The need for dietary counseling during lactation is based on the need to replenish maternal stores.⁴⁷⁻⁴⁹ Regardless of the mother's intake, it is recommended that breastfeeding mothers be screened for nutritional problems and provided with dietary guidance. When a woman is identified with a restrictive eating pattern, she should be counseled to make the necessary changes. Table 1 presents suggested measures for improving nutrient intake under different types of restrictive eating patterns.²⁹

TABLE 1
Suggested Measures for Improving the Nutrient Intakes of Women with Restrictive Eating Patterns

Type of Restrictive Eating Pattern	Corrective Measures
Excessive restriction of food intake (i.e., ingestion of <1,800 kcal of energy per day), which ordinarily leads to unsatisfactory intake of nutrients compared with the amounts needed by lactating women	Encourage increased intake of nutrient-rich foods to achieve an energy intake of at least 1,800 kcal/day; if the mother insists on curbing food intake sharply, promote substitution of foods rich in vitamins, minerals, and protein for those lower in nutritive value; in individual cases, it may be advisable to recommend a balanced multivitamin-mineral supplement; discourage use of liquid weight loss diets and appetite suppressants
Complete vegetarianism (i.e., avoidance of all animal foods, including meat, fish, dairy products, and eggs)	Advise intake of a regular source of vitamin B ₁₂ , such as special vitamin B ₁₂ -containing plant food products or a 2.6 µg vitamin B ₁₂ supplement daily
Avoidance of milk, cheese, or other calcium-rich products	Encourage increased intake of other culturally appropriate dietary calcium sources, such as collard greens for [African Americans] from the southeastern United States; provide information on the appropriate use of low-lactose dairy products if milk is being avoided because of lactose intolerance; if correction by diet cannot be achieved, it may be advisable to recommend 600 mg of elemental calcium per day taken with meals
Avoidance of vitamin D-fortified foods, such as fortified milk or cereal combined with limited exposure to ultraviolet light	Recommend 10 µg of supplemental vitamin D per day

Source: Reprinted with permission from *Nutrition During Lactation*.²⁹ Copyright 1991 by the National Academy of Sciences. Courtesy of the National Academy Press, Washington, DC.

1. Restriction of total intake to less than 1,800 kilocalories energy per day is associated with reduced intake of vitamins and minerals. In extreme cases where the mother is unable to improve her diet, vitamin supplements can be prescribed.
2. Complete vegetarianism (veganism)—that is, avoidance of all animal protein (meat, fish, dairy products, and eggs)—is commonly associated with diminished maternal body stores of B₆ and B₁₂. It is important to recognize that symptoms may occur in the breastfed infant before they appear in the mother. Supplementation of the mother's diet is the preferred route of treatment, although in symptomatic cases the infant may require direct treatment initially. This is not a contraindication to breastfeeding. A daily vitamin B₁₂ supplement of 2.6 micrograms may be necessary for the mother.^{50,51}
3. Avoidance of milk and other dairy products is recommended for women with suspected milk allergy or for prevention of certain allergic problems in their offspring. Avoidance of these dairy products is associated with inadequate intake of calcium, although calcium absorption is enhanced during lactation. Low calcium intake does not affect the composition of the milk, but it diminishes maternal bone stores.⁵² Dietary counseling should encourage intake of other calcium-rich foods such as greens, nuts, fish with bones, and tofu. Failing adequate calcium intake, calcium supplements totaling 1,200 milligrams per day are recommended.
4. Inadequate dietary sources or exposure to ultraviolet light should be managed by increasing maternal vitamin D in the diet or supplementing the mother's diet with 10 micrograms of vitamin D per day.

Dietary fetishes and restrictions can be managed by appropriately adjusting the maternal diet or giving supplements. It is important to monitor maternal compliance

with such recommendations since some women adhere to nutritionally unsound diets. If the mother refuses such advice, the infant's diet can be supplemented with adequate amounts of the nutrient in question.²⁹ Poor maternal diet is not a contraindication to breastfeeding. The urgency of dietary counseling in the lactating woman is to replenish her nutritional stores.

Infectious Diseases and Breastfeeding

In general, acute infectious diseases in the mother are not a contraindication to breastfeeding, if such diseases can be readily controlled and treated.⁵³ In most cases, the mother develops the infection during breastfeeding. By the time the diagnosis has been made, the infant has already been exposed and the best management is to continue breastfeeding so that the infant will receive the mother's antibodies and other host resistance factors in breastmilk. This is true for respiratory infections such as the common cold. Infections of the urinary tract or other specific closed systems such as the reproductive tract or gastrointestinal tract do not pose a risk for excreting the virus or bacteria in the breastmilk unless there is generalized septicemia. When the offending organism is especially virulent or contagious (as with beta-hemolytic streptococcus, group A), both mother and infant should be treated, but breastfeeding is not contraindicated.^{1,53}

There are many agents in breastmilk that protect against infection, and their presence is not affected by nutritional status. Protection against infection is important in the United States, especially among infants exposed to multiple caregivers, child care outside the home, compromised environments, and less attention to the spread of organisms.³ One of the most important and thoroughly studied agents in breastmilk is secretory immunoglobulin (specifically, secretory IgA), which is pre-

sent in high concentrations in colostrum and early breastmilk and in lower concentrations throughout lactation when the volume of milk is increased.⁵⁴ Secretory IgA antibodies may neutralize viruses, bacteria, or their toxins and are capable of activating the alternate complement pathway.⁵⁵ The normal flora of the intestinal tract of the breastfed infant, as well as the offspring of all other mammalian species studied until weaning, is bifidobacterium or lactobacillus.⁵⁴ These bacteria further inhibit the growth of bacterial pathogens by producing organic acids. This is in striking contrast to the formula-fed infant, who has comparatively little bifidobacterium and many coliforms and enterococci. In addition, although the attack rates of certain infections are similar in breastfed and formula-fed infants in the same community, the manifestations of the infections are much less evident in the infants who are breastfed. This appears to be due to anti-inflammatory agents in breastmilk.⁵⁶

A few specific infectious diseases are capable of overwhelming the protective mechanisms of breastmilk and breastfeeding, as detailed in the discussion that follows.^{53,57}

Human Immunodeficiency Virus and Acquired Immunodeficiency Syndrome

Clinically effective treatments for human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS) are still being developed; therefore, any behavior—including breastfeeding—that increases the risk of transmitting the virus from mother to infant should be avoided in the United States. Even though the value of being breastfed is great, failure to breastfeed does not result in a large increase in mortality among U.S. infants. Not all infants born to U.S. HIV-infected mothers are infected at birth, but present laboratory techniques require several months to identify the newborn who has HIV. It is known from work in Africa that infants with HIV who are breastfed do better than those with HIV who are not breastfed.⁵⁹ Fifteen percent of HIV-positive infants in Africa die as a

result of the virus in the first year of life if they are protected by breastfeeding, whereas 50 percent of all non-breastfed infants in this population and in the general population die during their first year for lack of the protective constituents of breastmilk.^{53,59-61}

Because of the inability to distinguish prepartum, intrapartum, and postpartum transmission of HIV and the dilemma of developing an ethical study with adequate sample size and controls, a computer model was developed to assess the impact of breastfeeding practices on the mortality of children under five years of age in developing countries (using parameter values for a hypothetical East African country).⁶² Cessation of breastfeeding in urban areas was projected to result in a 108 percent increase in mortality in children under age five whose mothers were HIV negative at the time of the infant's birth, and a 27 percent additional increase in mortality among those whose mothers were HIV positive. The numbers projected for rural areas were even higher. These calculations support the recommendation in Africa for breastfeeding in the case of maternal HIV.^{59,62}

Present studies in the United States that provide HIV-positive women with zidovudine (AZT) during pregnancy and immediate treatment for their infants at birth have shown improved outcome for these infants, with a reduced rate of infection. Although AZT is not a contraindication for breastfeeding, both mother and infant would require postpartum treatment. A carefully controlled study by the Pediatric AIDS Clinical Trials Group Protocol 076 (ACTG 076) yielded the most important result in clinical AIDS research to date. The study demonstrated that HIV transmission could be prevented in approximately 67 percent of infants when zidovudine (AZT) was administered to the mother both intragestationally and during the intrapartum period, and to the infant during the first six weeks of life.⁶³

Much publicity has surrounded the issue of breastfeeding by women who became infect-

ed with HIV while lactating.^{58,60,64,65} It seemed initially that most of these cases occurred because of a maternal transfusion with contaminated blood postpartum, so that the pathway of the infant's exposure seemed clear. One study found a 29 percent risk of vertical transmission (mother to infant) if the mother became infected during lactation.⁶⁰ In Australia, 3 of 11 infants (27 percent) breastfed for nine months or more by mothers who received contaminated transfusions (and by one mother using contaminated needles) became infected.⁶⁶

In the United States, approximately one-third of infants of infected mothers develop AIDS through vertical transmission. Of the pediatric AIDS cases, 84 percent are due to vertical transmission. There are three points perinatally, however, at which the disease could be transmitted: (1) during intrauterine gestation, (2) during delivery, through blood and secretions, and (3) postnatally, through maternal milk and potentially saliva and tears. Studies have shown postpartum conversion in women without transfusions, probably from sexual activity. Knowing the route of infection in the mother does not establish the route in the infant. In at least four reported cases, infected maternal transfusion did not result in disease in the breastfeeding infant.⁶⁵ The potential transmission of HIV-1 through breastfeeding continues to be acknowledged even though it is not well quantified. Recommendations are therefore based on perceived risks and benefits.⁵⁷

Efforts to detect HIV-1 P24 antigen (by the antigen capture method and viral DNA by means of polymerase chain reaction) in the milk of 47 seropositive women identified HIV-1 DNA in 70 percent of specimens at 0–4 days postpartum.⁶⁷ Samples collected 6–12 months postpartum yielded a 50 percent capture rate. P24 antigen was detected in 24 percent of the milk samples of 37 seropositive women at 0–4 days postpartum but not in subsequent specimens. The presence of HIV-1 DNA or P24 antigen in milk was not significantly associated with maternal CD4 lympho-

cyte counts, beta₂-microglobulin levels, or clinical case criteria.⁵⁷ Much is still to be learned about the relationship between breastfeeding and transmission of HIV to the recipient infant and about the associated indicators, since all infants breastfed by HIV-positive mothers do not become infected with HIV.^{62,64,68}

An estimation of risk of HIV-1 transmission through the breastmilk of infected mothers was determined in a study of 168 breastfed and 793 formula-fed infants of seropositive women. Odds ratios were determined by duration. This study found that the longer the infant was breastfed beyond the neonatal period (28 days), the greater the risk of acquiring HIV.⁶⁸

In reviewing the role of breastfeeding in HIV infection, the following major issues continue to elude definitive answer:⁶⁵

1. The risk of vertical transmission of HIV through breastfeeding
2. The effect of breastfeeding on HIV-infected infants
3. The effect of breastfeeding on noninfected infants of HIV-infected women
4. The effect of lactation on HIV-infected women
5. The effect of AZT on transmission of HIV through breastfeeding

Advances in treatment during the perinatal period may provide the solution in the next decade. If medication can control viral shedding, breastfeeding with all its benefits may be available to the infants of HIV-infected women receiving treatment.

While studies and reports about HIV infection in the perinatal period continue to accumulate, its association with breastfeeding is still unclear. In the United States, the position of the Centers for Disease Control and Prevention (CDC) with regard to HIV-positive mothers is not to breastfeed. The World Health Organization (WHO) states that, in

developing countries or areas where the risk of infant mortality from infection is great, breastfeeding is recommended even in the event of maternal AIDS.¹⁰ (This position is undergoing review and investigation, which may support or change the current recommendation.) Where the risk of mortality from other infections is not great, mothers with HIV should be counseled on alternatives to breastfeeding.

The American Academy of Pediatrics (AAP) Committee on Pediatric AIDS developed the following recommendations⁵³ on breastfeeding and transmission of HIV in the United States:

- Women and their health care providers need to be aware of the potential risk of transmission of HIV infection to infants during pregnancy and in the peripartum period, as well as through human milk.
- Documented, routine HIV education and routine testing with consent of all women seeking prenatal care are strongly recommended in order that each woman know her HIV status and the methods available both to prevent the acquisition and transmission of HIV and to determine whether breastfeeding is appropriate.
- At the time of delivery, education about HIV and testing with consent of all women whose HIV status during pregnancy is unknown are strongly recommended. Knowledge of the woman's HIV status assists in counseling on breastfeeding and helps each woman understand the benefits to herself and her infant of knowing her serostatus and the behaviors that would decrease the likelihood of acquisition and transmission of HIV.
- Women who are known to be HIV infected must be counseled not to breastfeed or provide their milk for the nutrition of their own or other infants.
- In general, women who are known to be HIV seronegative should be encouraged to breastfeed. However, women who are HIV seronegative but at particularly high risk of seroconversion (e.g., injection drug users and sexual partners of known HIV-positive persons or active drug users) should be educated about HIV with an individualized recommendation concerning the appropriateness of breastfeeding. In addition, during the perinatal period, information should be provided on the potential risk of transmitting HIV through human milk and about methods to reduce the risk of acquiring HIV infection.
- Each woman whose HIV status is unknown should be informed of the potential for HIV-infected women to transmit HIV during the peripartum period and through human milk and the potential benefits to her and her infant of knowing her HIV status and how HIV is acquired and transmitted. The health care provider needs to make an individualized recommendation to assist the woman in deciding whether to breastfeed.
- Neonatal intensive care units should develop policies that are consistent with these recommendations for the use of expressed human milk for neonates. Current standards of the Occupational Safety and Health Administration (OSHA) do not require gloves for the routine handling of expressed human milk. Gloves, however, should be worn by health care workers in situations where exposure to breastmilk might be frequent or prolonged, such as in milk banking.
- Human milk banks should follow the guidelines developed by the United States Public Health Service, which includes screening all donors for HIV infection and assessing risk factors that predispose to infection, as well as pasteurization of all milk specimens.

Tuberculosis

Breastfeeding is not contraindicated in women with previously positive skin tests and no evidence of disease.⁶⁹ In the event of

possible tuberculosis in the mother, the urgent problem is to establish the mother's and infant's status, initiate maternal treatment, and if necessary also initiate treatment in the infant during the diagnostic phase.⁶⁹ Diagnostic tests include identification of the tubercle bacilli by culture from sputum or gastric washings or other fluid. The skin test is the only practical tool for identifying infected asymptomatic individuals. A positive reaction is first detectable from as early as three to six weeks to as late as three months after exposure.⁵³

If all tests are negative, therapy for the infant can be discontinued. An infant born to a mother with known tuberculosis should be placed on preventive therapy immediately, consisting minimally of daily isoniazid (INH). If the mother has been treated, she may breastfeed.⁵³

Differentiation between tuberculosis infection and active disease is important. If infection with *Mycobacterium tuberculosis* occurs but is contained because of immune responses, delayed hypersensitivity to the bacilli can result in a positive skin test, but the chest roentgenogram (x-ray) is normal and no signs or symptoms characteristic of the disease are present. Individuals with the disease, however, have clinical signs and symptoms and may have a chest x-ray that is characteristic of the disease.⁵³ The interval between the initial infection and the onset of disease may be weeks to years. Cases of active disease are currently most commonly seen in urban, low-income areas and in non-white racial and ethnic subgroups in the United States. Specific groups with the highest incidence of disease are first-generation immigrants from high-risk countries, Hispanics, African Americans, Asians, American Indians, and Alaskan Natives. The homeless and residents of correctional facilities are at greatest risk. Transmission of the bacillus is usually by inhalation of droplet nuclei produced by an adult or adolescent with cavitation lung disease, and the portal of entry is usually the respiratory tract. Tuberculosis is rarely transmit-

ted from mother to fetus via the placenta or infected amniotic fluid, except in cases of overwhelming maternal disease. Exposure postpartum from active disease would be by droplet formation from intimate contact, not via the breastmilk.

The duration of infectivity is usually a few weeks after initiation of appropriate antibiotic therapy.⁵³ The success of treatment, however, depends on the drug susceptibilities of the organism, the number of bacilli in infected sputum, and the frequency of the cough. Compliance with treatment is a key factor. The patient is considered noninfectious when the sputum is negative on repeated smears and cultures and the cough disappears. Infants with primary tuberculosis are usually not contagious because their lesions are usually small, few if any bacilli are found in sputum, and cough is minimal or absent.

Treatment of active disease consists of at least six months of therapy. In most cases, INH, rifampin, and pyrazinamide are given for the first two months and INH and rifampin for the next four months.^{53,70}

If active disease is discovered during pregnancy, a nine-month course of INH and rifampin is given.⁵³ Pyrazinamide usually is not given because of inadequate information about its potential teratogenic properties. Ethambutol may be added to the initial regimen if a resistant strain of *Mycobacterium tuberculosis* is suspected. Isoniazid, ethambutol, and rifampin appear to be relatively safe for the fetus, and the benefit of medication for active disease outweighs the risk. In pregnant women with a positive skin test but no major risk factors, preventive therapy can be postponed until after delivery.^{53,70,71}

Breastfeeding is not contraindicated in women with previously positive skin tests and no evidence of disease.⁶⁹ An individual with a recent conversion to a positive skin test should be evaluated for active disease with a medical history, physical examination, and chest x-ray. If there is no sign of disease,

breastfeeding can begin or continue. If the mother has suspicious symptoms, especially a productive cough, direct contact with the infant to breastfeed or to bottlefeed should be discontinued until the diagnosis is made. If the mother wishes to breastfeed, she should pump her breasts to establish and maintain her milk supply while evaluation is in process. An electric pump may be required in order to successfully establish the milk supply. If the mother is disease-free, breastfeeding may then proceed, and previously pumped milk may be provided to the infant. If there is disease, appropriate medications should be initiated.⁷¹ Breastfeeding may be initiated or resumed after two or more weeks of adequate maternal therapy. During this time, lactation can be maintained by pumping and saving the milk since the disease is not transmitted via the milk. If it is safe for the mother to be in contact with the infant, she may breastfeed. In developing countries where non-breastfed infants have a 50 percent mortality rate from other infections, breastfeeding should not be interrupted during diagnosis and early therapy. The infant should be treated from the beginning.

The safety of using antitubercular drugs during lactation depends on the safety of the drug itself for the infant. (Drugs and breastfeeding are discussed fully in the section on medications.) As with most antibiotics, some of these compounds cross into the breastmilk. It is important to note that the infant of a mother who requires antituberculosis medications should also be treated, regardless of feeding mode.^{53,70}

Use of these medications during lactation has received some attention.⁷⁰ INH is secreted into breastmilk, providing from 6 to 25 percent of the therapeutic dose for an infant. The agent has been found in the suckling infant's urine but not in measurable amounts in the blood. Since INH is given to neonates, it is not considered a contraindication to breastfeeding. While hepatotoxicity has been reported in some infants on full therapeutic doses, it has not been reported in breastfeeding infants.⁶⁹

Pyridoxine (B₆) is recommended as an adjunct to therapy with INH in adults and adolescents and in breastfeeding infants of mothers receiving INH. INH has a maternal half-life of about six hours. Food decreases the absorption in the infant, so INH is less well absorbed from the breastmilk. The AAP rating for INH is 6 (i.e., compatible with breastfeeding).⁷² The infant's therapeutic dose can be modified to account for a small amount from the breastmilk (16 milligrams/liter).

Rifampin is also secreted into breastmilk in small amounts. It can also be given to infants directly and is considered safe for lactating women. Serum concentrations peak at about three hours after the dose is given. The milk/plasma ratio is less than 1; it is protein bound and only .05 percent of the adult dose reaches the milk. The peak level is estimated to be 4.9 milligrams per liter of milk.^{70,71} The AAP rating for the drug is 6 (compatible with breastfeeding). It is important to note that the drug may turn the milk orange, as it does other secretions such as tears, sweat, and urine.

Ethambutol also may be transmitted in breastmilk. Ethambutol is less orally bioavailable (77 percent), the serum concentration peak is three hours, and the milk/plasma ratio of the agent is less than 1. About 1 to 5.7 percent of the therapeutic dose is found in the milk.¹ AAP has given ethambutol a rating of 6 (compatible with breastfeeding).⁷²

Pyrazinamide also appears in breastmilk in very small amounts and is readily absorbed orally, but little study has been done on it and the AAP has not rated it. Pyrazinamide is bactericidal and well tolerated by most infants. The agent rarely causes hepatotoxicity in infants or children.^{70,71}

Streptomycin in short courses is given a rating of 6 (compatible with breastfeeding) by the AAP. Even though only small amounts of the antibiotic reach the milk, extended treatment with the agent should be avoided because of the potential for ototoxicity.⁷²

Mycobacterium tuberculosis rarely causes mastitis or a breast abscess. Local infections, therefore, are not a major factor in the decision to terminate breastfeeding. If it is safe for the mother to be in contact with the infant, it is safe to breastfeed.

Hepatitis

All types of hepatitis are not the same; each type carries different risks of contagion, pathways of exposure, and possible treatments and preventive measures. The major types—A, B, and C—will be discussed separately.

Hepatitis A is an acute illness associated with fever, jaundice, anorexia, nausea, and malaise. It is rarely fulminant and does not become chronic. It is usually transmitted from person to person through fecal contamination and through an oral-fecal route. Food-borne and water-borne epidemics are common and case spread in child care facilities is well documented.⁵³ When there is exposure to an index case or a food handler with the disease, gamma globulin (GG) 0.02 milliliters/kilogram should be given as soon as possible, but no later than two weeks after exposure.⁵³

A newborn infant is rarely infected by vertical transmission from an infected mother during delivery. Universal precautions are the appropriate management for the newborn infant. Breastfeeding is permitted and gamma globulin is given to the infant if the mother developed the disease within two weeks of delivery. Severe disease in newborns has not been reported, with or without gamma globulin.⁵³ When a mother with hepatitis A has received gamma globulin, breastfeeding is permitted.

Hepatitis B virus (HBV) can cause a wide spectrum of infections from asymptomatic seroconversion to fulminant fatal hepatitis or chronic liver disease in the carrier state. Recent developments in prevention and management have changed the management of infected women during pregnancy and have made breastfeeding safe.⁵³

Mandatory prenatal testing for HBV exists in most states, so the mother's status with respect to the disease is known at delivery. All infants born to mothers with active disease or persistent hepatitis B surface antigen (HBsAg) should receive hepatitis B specific immunoglobulin (HBIG) immediately at birth or as soon thereafter as possible. In addition, these infants should be started on the immunization program, receiving their first dose of hepatitis vaccine within 24 hours after birth or at least before hospital discharge. They should receive the second dose at 3 to 4 weeks of age, and the third dose between 6 and 18 months of age.⁵³ As soon as HBIG is given, breastfeeding may begin. When a mother is unregistered and no prenatal testing has been done, it is recommended that the infant receive HBIG immediately, followed by vaccination with hepatitis B vaccine in the newborn nursery. If there are facilities to quickly test the unscreened mother, the infant can be given the vaccine immediately or within 12 hours after birth and then given HBIG as soon as the results are known to be positive, but no later than one week after birth. Universal vaccination of all infants, including those born to mothers who are HBsAg-negative, is recommended by AAP.⁵³

In developing countries, where hepatitis is common and HBIG and vaccine are not available, breastfeeding is recommended because of its tremendous benefits to the infant.⁵³ In this country, HBIG and vaccination are necessary to remove the remote chance of infection when the mother is HBsAg-positive.⁵³ Breastfeeding is permitted after the infant receives HBIG. The first dose of hepatitis B vaccine is given before discharge. Table 2 presents the recommended schedule of HBIG and hepatitis B vaccine to prevent perinatal transmission of HBV.

Breastfeeding should not be discouraged in hepatitis C (HCV) carrier mothers without coinfection.⁷³ Hepatitis C, parenterally transmitted, was originally identified as non-A non-B hepatitis. It is characterized by the insidious onset of jaundice and malaise, with few or no symptoms associated with positive serologic

TABLE 2
Recommended Schedule of Hepatitis B Immunoprophylaxis to
Prevent Perinatal Transmission

Infant born to mother known to be HBsAG-positive	
<i>Vaccine Dose and HBIG</i>	<i>Age</i>
First	Birth (within 12 h)
HBIG [†]	Birth (within 12 h)
Second	1–2 mo
Third	6 mo
Infant born to mother not screened for HBsAg	
<i>Vaccine Dose and HBIG</i>	<i>Age</i>
First [‡]	Birth (within 12 h)
HBIG [†]	If mother is found to be HBsAg positive, give 0.5 mL as soon as possible, not later than 1 wk after birth
Second	1–2 mo [§]
Third	6–18 mo

[†]HBIG (0.5 mL) given intramuscularly at a site different from that used for vaccine.

[‡]First dose is same as that for infant of HBsAG-positive mother. Subsequent doses and schedules are determined by maternal HBsAG status.

[§]Infants of HBsAG-positive mothers should be vaccinated at 1 mo of age.

^{||}Infants of HBsAG-positive mothers should be vaccinated at 6 mo.

Source: Adapted with permission from the American Academy of Pediatrics,⁵³ table 3.19. Copyright American Academy of Pediatrics.

tests on routine screening for insurance, blood donation, or employment.⁵³ About 50 percent of serologically confirmed individuals develop chronic liver disease including cirrhosis; in rare cases, individuals develop hepatocellular carcinoma. Transmission is by parenteral administration of blood or blood products including some early batches of RhoGAM. Person-to-person spread, including sexual contact, is suspected but not confirmed.^{53,74} At risk are parenteral drug users, persons receiving blood transfusions or blood products, health care workers with frequent blood exposure, and household and sexual contact with an infected person.

Diagnosis is made by serologic tests for anti-HCV antibodies. False negative results

are rare but false positives are common.⁷⁴ The presence of the HCV RNA genome or related antigen in the circulation during infection is a reliable marker for viremia but the analytical methods are not refined or practical. There is no specific treatment, although alpha interferon may be beneficial in a small proportion of cases. Gamma globulin has not been successful for prophylaxis of this infection. HCV causes a slowly evolving disease with major potential for morbidity and mortality associated with chronic liver disease.^{75,76}

It has been established that HCV is vertically transmitted from mother to infant, and the risks of transmission are correlated with the level of HCV RNA antibodies in the mother and in the cord blood.^{73,75,77–79} Ohto et al.⁷⁵

conducted a series of three independent studies on transmission of hepatitis C virus from mothers to infants. In the first prospective study of 53 antibody-positive mothers and their infants (54 infants, including one set of twins), three of the infants (5.6 percent) became positive within six months. The mothers of these infants were HCV RNA-positive at the time of delivery. None of the infants who were HCV RNA-negative at birth became infected. In the second prospective study, one of six infants born to women with known disease became infected. In the third study, three infected infants were followed retrospectively, and their mothers were all HCV RNA-positive. The titers of HCV RNA in mothers of infected infants were all significantly higher than those of noninfected infants. Other studies have reported 0 to 13 percent of infants born to anti-HCV-positive women to be HCV infected.⁸⁰ No woman whose HCV RNA titer was negative or less than 10^6 per milliliter transmitted disease to her infant.⁸⁰

In response to queries, Ohto et al. reported that of a group of 63 infants studied, 6 of the 7 infected infants were breastfed; however, 33 of the 56 noninfected infants were also breastfed; 6 of the 7 mothers of the noninfected infants who were breastfed had HCV RNA in their serum at a titer $\geq 10^6$ per milliliter (i.e., comparable to the titers of mothers with infected infants). The duration of breastfeeding differed between the two groups. Although the findings were not statistically significant, the infected infants nursed 6.6 ± 3.6 months, and the noninfected infants nursed 2.0 ± 2.9 months. When the entire group of 63 infants (for all three studies in the series) was considered, the duration of breastfeeding for the 6 infected breastfed infants was 6.6 ± 3.6 months, compared to 3.3 ± 3.1 months for the 33 noninfected breastfed infants.

Gürakan et al.⁷⁶ reported the case of a woman who received an infected blood transfusion at seven months' gestation and delivered an infant who had anti-HCV antibodies

and was HCV RNA-positive. Her breastmilk also contained antibodies and HCV RNA. The infant was not breastfed and at four months was antibody- and RNA-negative. Unfortunately, the breastmilk was not analyzed.

In a large prospective study in Italy of mother-to-infant transmission of hepatitis C virus, none of the 94 babies of mothers with anti-HCV alone (without HIV) became infected, and by age one year their titers were negative.⁷⁹ Furthermore, 71 (76 percent) of these infants, 23 of whom were born to HCV RNA-positive mothers, remained noninfected although they were breastfed. In this study, co-infection with HIV was associated with HCV infection in the infants. These authors did not feel that breastfeeding was a significant vertical perinatal route of HCV infection.⁷⁹

In a study of 116 infants whose mothers were HCV-positive, 22 of the mothers were also infected with HIV. Of the infants whose mothers were HCV-positive but not HIV-positive, none acquired HIV infection. Of the 22 infants whose mothers were co-infected with HCV and HIV, 8 of the infants (36 percent) acquired HCV and 3 acquired both HCV and HIV. These data support the concept that HIV enhances the risk of neonatal infection.⁷⁹

In a study of 15 mothers with HCV infection, Lin et al.⁷³ reported that both HCV antibodies and HCV RNA were detected in the colostrum of all 15 mothers. Although the mothers' titers varied from 1:80 to 1:40,000 and the RNA concentrations varied from 10^4 to 2.5×10^8 copies/milliliter, the colostrum levels were lower. The 11 breastfed infants had no anti-HCV and no HCV RNA at the end of one year. Breastfeeding duration had ranged from three weeks to four months, with a mean of two months. Lin et al. concluded that breastfeeding should not be discouraged in HCV carrier mothers without co-infections and proposed the following explanations:^{73,74}

1. HCV levels are too low in colostrum to infect the infant.

2. A small amount of HCV may be inactivated in the infant's gastrointestinal tract.
3. The integrity of the mucosa of the infant may preclude infection by the oral route.
4. There may be neutralization of HCV by antibodies in the colostrum.

Venereal Warts

Venereal warts are epithelial tumors of the skin and mucous membranes of the anogenital area caused by human papilloma virus (HPV).⁵³ They vary from asymptomatic infection to condylomata acuminata, skin-colored growths with a cauliflower-like surface. In females, the usual sites are cervix, introitus, labia, perineum, vagina, and perianal areas. Typically, they are asymptomatic, but they may cause itching, burning, localized pain, or bleeding. Transmission to the infant could occur during passage through the birth canal. On rare occasions, the warts have been associated with laryngeal papillomas. Lesions have not been reported on the breast. The viruses that cause warts elsewhere are distinct from those causing genital warts.⁵³ Venereal warts in the genital area are not a contraindication to breastfeeding.

Herpes Viruses

In the human, there are four known herpes viruses: cytomegalovirus (CMV), herpes simplex virus (HSV), herpes varicella-zoster virus (VZV), and Epstein-Barr virus (EBV). CMV, VZV, and EBV are believed to be antigenically related on the basis of cross-reactions observed in immunofluorescent assays.

Cytomegalovirus causes systemic infections that vary with the age and immunocompetence of the host but are predominantly asymptomatic.⁵³ Although infections acquired postnatally can be similar to those found in infectious mononucleosis, infection is rarely significant except in immunocompromised individuals who are being treated for malignancies, infected with HIV, or receiving

immunosuppressive therapy for transplant. Infections acquired transplacentally, during the intrapartum period, or in early infancy may be a problem. Congenital infections usually are asymptomatic but can result in later hearing loss or learning disability. About 5 percent of infected infants have profound involvement with growth retardation, jaundice, microcephaly, intracerebral calcifications, and chorioretinitis.⁸¹ Infections acquired at birth from maternal cervical secretions or breastmilk usually are not associated with symptoms. Infants with congenital or acquired infections usually do better if they are breastfed, because of the continuing supply of maternal antibodies provided in their mother's breastmilk. Infants, usually premature infants infected through CMV seropositive blood, have developed lower respiratory tract infections.⁸² Blood products for neonates are now specifically screened for CMV and irradiated.

CMV, though not highly contagious, is ubiquitous. For infants, the birth process and child care exposure are the common sites. Effects on the infant are greatest when the mother develops a primary infection during pregnancy. CMV is usually acquired during late adolescence. Young mothers are at greater risk for developing the disease during pregnancy. In a random study of postpartum women, 39 percent had CMV in their milk, vaginal secretions, urine, and saliva.⁸¹ Of the infants who were breastfed, 69 percent developed infections while the antibodies were present in the milk. The infants shed the virus, developed immune responses to the virus, but did not develop disease. Transmission of CMV from breastmilk is related to the duration of breastfeeding. Reactivation of CMV in the breastmilk peaks between 2 and 12 weeks, a time when transplacental antibody is waning. Infants who continue to receive antibody or associated protective factors via the milk rarely manifest any symptoms. Non-breastfed infants can be infected via other secretions, including saliva; they do not receive protective antibodies or other host resistance factors present in breastmilk⁸² and may have signifi-

cant residuals of the disease (e.g., microcephaly and mental retardation).

Term infants can be breastfed when the mother is shedding virus in her milk because of the passively transferred maternal antibodies. Premature infants with low concentrations of transplacentally acquired maternal antibodies can develop disease from fresh breastmilk containing the virus.⁵³ Freezing destroys the virus, and breastmilk can be frozen at -20 degrees centigrade for seven days before feeding it to the infant for the first few weeks, until the titer of antibody received via the milk increases. (Some experts consider storage for three days at -20 degrees centigrade adequate.)^{53,82}

Herpes simplex virus infection in the neonatal period is often severely debilitating or fatal. It can be manifested as a generalized systemic infection, as localized central nervous system (CNS) disease, or as localized infection of skin, eyes, and mouth. Typical vesicular lesions are helpful diagnostic signs. The infection is most frequently transmitted to the infant during passage through the birth canal when the mother has an infected lower genital tract. In 33 to 50 percent of cases, there is risk of neonatal disease from a primary lesion in the mother. The risk to the infant born to a mother with recurrent HSV is, at most, 3 to 5 percent. Disseminated neonatal disease usually occurs within 14 days of birth.⁵³

The cases reported in the literature associating neonatal herpes with breastfeeding have involved lesions on the breast itself.^{83,84} HSV cultures are easily obtained and the virus usually grows in a few days; smears of secretions are readily done and serum antibody titers can be obtained. A definitive diagnosis of a suspicious lesion on the breast can be made quickly and breastfeeding withheld temporarily until herpes is ruled out. This is especially important in the first few months of life when the neonate is very prone to serious infection from HSV.⁵³ It is recommended that women with herpetic lesions on their breasts refrain

from breastfeeding until they are completely cleared.

Active HSV lesions elsewhere should be covered and the mother should be instructed to wash her hands carefully before handling the infant. A mother with herpes labialis (cold sore) or stomatitis should wear a disposable surgical mask and wash her hands carefully when touching her newborn until the lesions have crusted and dried. Whether breastfeeding or formula feeding the mother should not kiss or nuzzle her newborn until the lesions have cleared.

Herpes varicella-zoster virus (which causes chicken pox) is one of the most contagious of diseases.⁸⁵ The incidence is reported at 5/10,000 pregnancies. As the vaccine becomes more widely used and natural disease less likely, new guidelines may be necessary. Presently, risk of infection to the neonate depends upon when the disease occurs during the mother's pregnancy or postpartum period. Congenital chicken pox, by definition, occurs in neonates younger than 10 days of age and is associated with significant mortality. Varicella virus DNA has been detected in breastmilk, but the spread of disease from mother to infant after delivery is by direct contact, not by feeding. Infants born to mothers who have varicella can develop the infection between 1 and 16 days of life. The usual time interval from onset of rash in the mother to onset in the neonate is 9 to 15 days.

When maternal chicken pox occurs immediately postpartum or within six days of delivery and no lesions are present in the neonate, mother and infant should be isolated from each other. Only half of the neonates will develop the disease, but all of them should receive varicella zoster immune globulin (ZIG) immediately at birth. When the mother becomes noninfectious, she can be with her infant and breastfeed.⁵³

Epstein-Barr virus is the principal cause of infectious mononucleosis, which is usually a disease of adolescence and young adult life

and is rarely recognized in infants and young children. An association between pregnancy and EBV has not been established, and breastfeeding is not restricted during Epstein-Barr virus infection.⁵³

Toxoplasmosis

Toxoplasmosis is one of the most common infections of humans throughout the world. The protozoan organism is ubiquitous, causing a variety of illnesses previously thought to be due to other agents or unknown causes.¹ The normal host is the cat. The pregnant or lactating woman should not handle kitty litter. Kitty litter should, however, be disposed of daily, as the oocysts are not infective for the first 48 hours after passage. In humans, prevalence of positive serologic test titers increases with age, indicating past exposure, and there is equal distribution in males and females in the United States.⁸⁶ The risk to the fetus is related to the time when maternal infection occurs. In the last months of pregnancy, the protozoa are most frequently transmitted to the fetus, but the infection is subclinical in the newborn. Early in pregnancy, transmission to the fetus occurs less often but does result in severe disease. Once the placenta has been infected, it remains so throughout pregnancy.

Toxoplasma gondii (*T. gondii*) have been isolated from breastmilk, menstrual fluid, placenta, lochia, amniotic fluid, embryo, and fetal brain in 33 percent of the subjects in one series.⁸⁶

Transmission during breastfeeding in humans has not been demonstrated. It is possible that unpasteurized cow milk could be a vehicle of transmission. The human mother, however, would provide appropriate antibodies via her milk. From this information, it appears there is no evidence to support depriving the neonate of breastmilk when the mother is known to be infected with *T. gondii*.⁸⁶

Mastitis

Mastitis is rarely a cause for discontinuing breastfeeding. It usually does not occur until 10 days postpartum (or later) except in rare cases when the mother has been massaging her breasts or nipples before delivery.⁷³

Mastitis is an infectious process in the breast producing localized tenderness, redness, and heat, together with systemic reactions of fever, malaise, and sometimes nausea and vomiting (i.e., flu-like symptoms). Mastitis is usually

TABLE 3
Characteristics of Engorgement, Plugged Ducts, and Mastitis

Characteristics	Engorgement	Plugged Duct	Mastitis
Onset	Gradual, immediately postpartum	Gradual, after feedings	Sudden, after 10 days
Site	Bilateral	Unilateral	Usually unilateral
Swelling and heat	Generalized	May shift/little or no heat	Localized, red, hot, and swollen
Pain	Generalized	Mild but localized	Intense but localized
Body temperature	<38.4°C	<38.4°C	>38.4°C
Systemic symptoms	Feels well	Feels well	Flu-like symptoms

Source: Reprinted with permission from Lawrence,¹ table 8-5.

due to an acute bacterial infection of a duct or lobule of the breast, precipitated by trauma or transient obstruction of the duct due to pressure from a strap or engorgement or poor drainage. It must be distinguished from a plugged duct or engorgement. The key differential points are compared in table 3. Before the development of antibiotics, when women were hospitalized two weeks postpartum, mastitis was epidemic in hospitals. Today, however, mastitis may be acquired in the hospital and then develop during the first four weeks postpartum at home if the mother or infant is colonized with a virulent bacteria. Because treatment is given at home, hospitalization for mastitis is rare and large series are not reported in the literature.

The common bacteria involved are staphylococcus aureus and, less commonly, E. coli. When the infection is bilateral and the mother is especially toxic, the bacteria is usually beta hemolytic streptococcus, and both mother and infant should be treated aggressively. A mother should always be instructed to contact her physician if unusual symptoms occur, so that proper management can be initiated promptly. Inappropriately or inadequately treated cases of mastitis predispose to recurrent or chronic mastitis. Most reports indicate that the cases of acute mastitis that result in poor outcomes, including abscess and recurrent disease, had significant delay between the onset of symptoms and the start of antibiotic therapy.^{87,88} Recurrent mastitis can also be traced to inadequate treatment when antibiotics are discontinued before a full 10 to 14 days.

Early management of mastitis should involve early evaluation by the physician, mid-stream cultures of the milk from the affected breast, and antibiotics. The following key points outline the recommended management of mastitis.⁷³

1. Continue to breastfeed on both breasts, usually starting with the unaffected side and taking care to totally empty the affected side at each feeding.

2. Ensure bed rest, with the mother's only responsibility being to feed the infant.
3. Select the antibiotic that is effective and safe for the infant. A minimum of 10 to 14 days' treatment will reduce the incidence of recurrence.
4. Apply local treatment of cold packs or warm packs, whichever provide the greatest relief of pain and discomfort.

Abscess formation is rare except when treatment is delayed or discontinued too quickly. If surgical drainage is necessary, breastfeeding should continue; the surgeon may leave a drain in place. Applying firm pressure over the incision will minimize the drainage of milk through the incision during feeding. Between feedings, the surgical drain will continue to drain the abscess.

Selection of the best antibiotic for mastitis depends upon safety and efficacy. In general, antibiotics pass into the milk. If the antibiotic can be given to the infant directly, it is considered safe for use during lactation.⁸⁹ Thus, only a very small number of antibiotics should be avoided. These include chloramphenicol, tetracycline, streptomycin, and ciprofloxacin. In most cases, there are sufficient alternatives so that breastfeeding need not be discontinued.^{1,72} Generally, breastfeeding should continue during acute mastitis. In rare circumstances when the abscess drains into the duct system, breastfeeding is contraindicated on that breast. Infected lesions on the breast, such as superficial boils, impetigo, and herpes simplex are contraindications to breastfeeding until the lesions clear.

Lyme Disease

Lyme disease has attracted increasing attention since it was identified in the United States in 1975.⁵³ The greatest concentration of cases is in the Northeast. Lyme borreliosis is a tick-borne infectious disease caused by the spirochete, *Borrelia burgdorferi*. The spirochete has been found in the fetus during preg-

nancy and results in fetal death if untreated. If the mother is adequately treated during pregnancy, the outcome is good.⁹⁰ The mother and infant need not be isolated from each other or from other patients.

If the disease is diagnosed postpartum, the mother should be treated immediately. The spirochete has been found in breastmilk,⁹¹ so the infant should also receive treatment, especially if any symptoms (e.g., rash, fever) develop. Indirect fluorescent antibody and ELISA tests are available. Once maternal treatment has begun, lactation can continue. The treatment prescribed is doxycycline or amoxicillin or the cephalosporins for at least 14 days. If the infant is healthy and the mother has initiated treatment for Lyme disease, the infant can be breastfed.

Human T-Cell Leukemia Virus Type 1

The incidence of human T-cell leukemia virus type 1 (HTLV-1) is increasing in parts of the world such as the West Indies, Africa, and southwestern Japan.⁹² There is virtually no transmission from the mother to the fetus, and cord bloods are not found to contain infected cells. On the other hand, infected lymphocytes have been found in the milk of infected mothers. Mathematically, it can be calculated that if 10 percent of cells in human colostrum are T-lymphocytes, and if 1 percent of them are infected, then 1 milliliter of milk will contain 1,000 infected T-cells. In a study in Japan,⁹³ the incidence of mother-to-child transmission of HTLV-1 was 30 percent among breastfed infants, 10 percent among mixed-fed infants, and nonexistent among formula-fed infants. Though it has not been confirmed whether the presence of infected cells in the milk actually causes disease, future studies may demonstrate that breastmilk and its antibodies are actually protective.

Although HTLV-1 is not increasing in the United States, trends may change. At the present time, it is recommended that, in the United States, the mother with HTLV-1 disease should not breastfeed.

Medication/Prescription Drugs and Street Drugs

Medications

Much concern and anxiety have been expressed regarding the question of medications taken by lactating women and the risk to the suckling infant. In reality, very few drugs are contraindicated during breastfeeding.⁷² Each situation should be evaluated on a case-by-case basis by the physician. The important factors include the pharmacokinetics of the drug in the maternal system and also the absorption, metabolism, distribution, storage, and excretion in the recipient infant. Variables that should be considered in the decision include gestational age, chronological age, body weight, breastfeeding pattern, and other dietary practices. Ultimately, the decision is made by assessing the risk/benefit ratio (i.e., the risk of a small amount of the drug compared to the tremendous benefit of being breastfed).¹

The American Academy of Pediatrics Committee on Drugs has prepared a rating of some of the more common medications that might be prescribed for women while lactating.⁷² Following are the numerical ratings:

1. Drugs that are contraindicated during breastfeeding
2. Drugs of abuse: contraindicated during breastfeeding
3. Radioactive compounds that require temporary cessation of breastfeeding
4. Drugs whose effect on nursing infants is unknown but may be of concern
5. Drugs that have been associated with significant effects on some nursing infants and should be given to nursing mothers with caution
6. Maternal medication usually compatible with breastfeeding
7. Food and environmental agents: effect on breastfeeding

Table 4 presents the list of drugs contraindicated for breastfeeding. It is important to note that bromocriptine suppresses the production of one of the main lactogenic hormones, prolactin.⁷² However, if a woman has been able to become pregnant and delivers a healthy infant while on bromocriptine for pituitary adenoma, the drug is not a contraindication to breastfeeding her infant. It will be particularly important, however, to monitor her milk production. Thus, bromocriptine should not be rated 1 but rather 5 or 6, and its use in individual cases should be decided by the mother's physician.

Radioactive compounds, if given for diagnostic purposes in a single dose, require temporary cessation of breastfeeding.¹ Once the radioactive compound has cleared the mother's plasma, breastfeeding may be resumed. The time, however, varies from compound to compound. Physiologically, iodine is

“pumped” into the milk and has a milk/plasma ratio greater than 1. Radioactive iodine appears in high concentrations in milk. Some radioactive iodine compounds take more time to clear the body than others; for example, iodine 131 (¹³¹I) takes two weeks to clear the body, while gallium 67 (⁶⁷GA) takes only two days.¹ Table 5 lists the radioactive compounds and the time they take to clear from the milk. During this time, the mother should be instructed to pump her milk to maintain her supply, but to discard the milk.

When radioactive compounds are used in multiple doses for therapeutic purposes, it may take weeks or months to clear radioactivity from the milk and breastfeeding usually has to be discontinued. When these compounds are used therapeutically (e.g., ¹³¹I used for thyroid malignancy), the primary disease is usually serious, presenting an additional reason to avoid breastfeeding.

TABLE 4
Drugs That Are Contraindicated During Breastfeeding

Drug	Reason for Concern, Reported Sign or Symptom in Infant, or Effect on Lactation
Bromocriptine	Suppresses lactation; may be hazardous to the mother
Cocaine	Cocaine intoxication
Cyclophosphamide	Possible immune suppression; unknown effect on growth or association with carcinogenesis; neutropenia
Cyclosporine	Possible immune suppression; unknown effect on growth or association with carcinogenesis
Doxorubicin*	Possible immune suppression; unknown effect on growth or association with carcinogenesis
Ergotamine	Vomiting, diarrhea, convulsions (doses used in migraine medications)
Lithium	One-third to one-half therapeutic blood concentration in infants
Methotrexate	Possible immune suppression; unknown effect on growth or association with carcinogenesis; neutropenia
Phencyclidine (PCP)	Potent hallucinogen
Phenindione	Anticoagulant: increased prothrombin and partial thromboplastin time in one infant; not used in United States

*Drug is concentrated in human milk.

Source: Adapted with permission from the American Academy of Pediatrics Committee on Drugs,⁷² table 1. Copyright American Academy of Pediatrics.

TABLE 5
Radioactive Compounds That Require Temporary Cessation of Breastfeeding*

Drug	Recommended Time for Cessation of Breastfeeding
Copper 64 (⁶⁴ Cu)	Radioactivity in milk present at 50 h
Gallium 67 (⁶⁷ Ga)	Radioactivity in milk present for 2 wk
Indium 111 (^{111m} In)	Very small amount present at 20 h
Iodine 123 (¹²³ I)	Radioactivity in milk present up to 36 h
Iodine 125 (¹²⁵ I)	Radioactivity in milk present for 12 d
Iodine 131 (¹³¹ I)	Radioactivity in milk present 2–14 d, depending on study
Radioactive sodium	Radioactivity in milk present 96 h
Technetium-99m (^{99m} Tc), ^{99m} Rc macroaggregates, ^{99m} Tc O ₄	Radioactivity in milk present 15 h to 3 d

*Consult nuclear medicine physician before performing diagnostic study so that radionuclide that has shortest excretion time in breastmilk can be used. Before study, the mother should pump her breast and store enough milk in freezer for feeding the infant; after study, the mother should pump her breast to maintain milk production but discard all milk pumped for the required time that radioactivity is present in milk. Milk samples can be screened by radiology departments for radioactivity before resumption of nursing.

Source: Adapted with permission from the American Academy of Pediatrics Committee on Drugs,⁷² table 3. Copyright American Academy of Pediatrics.

Compounds rated 4 or 5 by the American Academy of Pediatrics' Committee on Drugs⁷² require individual consideration. Compounds rated 6 are usually compatible with breastfeeding. Drugs of abuse (rated 2) and environmental agents (rated 7) will be discussed separately. The AAP list is not exhaustive, and other resources may need to be consulted. (Additional information is available in other references; see Briggs⁸⁹ and Lawrence.¹) The Breastfeeding and Human Lactation Study Center ([716] 275-0088) provides additional information to professionals through an extensive computer database that is updated continually. Often, more than one drug is available for a given therapeutic need and it may be possible to change the medication to one that is less likely to cross into the milk or that is not well absorbed from the stomach by the infant.

Therefore, before breastfeeding is summarily discontinued, adequate information should be sought and the clinician should consider the risk of the drug versus the benefit of

breastfeeding for the infant. The pharmacologic properties of the drug that will affect passage into the milk are often known, even in the absence of extensive studies measuring the actual amount of drug that reaches the breastmilk. If compounds are quickly metabolized by the mother, little trace of the agents may remain in the plasma at feeding time. Thus, such medications are not a problem for the suckling infant. Compounds taken only occasionally by the dose (such as aspirin for headache) are rarely a problem. They clear the maternal plasma in a short period of time and do not accumulate in the infant. If the peak maternal plasma time for the drug is known, this will help in planning dosing times in relationship to feedings. Some medications are so poorly absorbed orally that they are given to the mother by injection or nasal spray. Such drugs have low oral bioavailability and would not be absorbed from the infant's stomach.

The chronologic age and maturity of the infant play an important role in the way compounds are metabolized by the infant; gesta-

tional age has an effect in the first few months of life because of the immaturity of liver metabolism and renal excretion. Thus, a drug that might be of concern for an infant at one week of age might be of little concern at four months.

A number of pharmacologists have attempted to simplify the concept of determining how much drug reaches the infant.⁹⁴⁻⁹⁶ The three-compartment pharmacologic model of Wilson et al.⁹⁵ assumes that breastmilk is the third compartment and only interacts when the infant is feeding and removing milk. This model suggests that the amount of the drug in breastmilk can be calculated if the level of the drug is known in one of the other compartments (e.g., the plasma). When breastmilk is not being removed, the breastmilk compartment equilibrates with compartment two, the interstitial compartment.⁹⁵ Application of this model is dependent upon knowing the rate constant for each drug—a factor not readily available.

Another model involves the volume of distribution of the parent compound.⁹⁷ The volume of distribution is determined by the total amount of drug in the body divided by the concentration of the drug in the plasma. This assumes the most elementary kinetic model in which the body is a single compartment and the drug is assumed to distribute evenly. Actually, if the volume of distribution of a drug is known, then the amount available to the infant via the milk can be calculated if the weight of the mother and the dose of the drug are known.⁹⁷ In general, drugs with a small volume of distribution (≤ 1) have milk/plasma ratios of 1 or higher (that is, some gets into the milk). Drugs with a large volume of distribution and a small dosage have very low concentrations that appear in the milk. The volume of distribution of many common drugs is recorded in the drug index.¹

Another way of determining risk is the exposure index, which has been described as a function of a coefficient (10 milliliter kilogram⁻¹ minute⁻¹). The drug clearance in the infant is

expressed as (milliliter kilogram⁻¹ minute⁻¹). This concept takes a pharmacokinetic parameter (drug clearance) and a physiochemical parameter (the milk/plasma ratio) to determine infant exposure.⁹⁸ Thus, high clearance drugs (those requiring large doses to achieve clinical effect) have lower levels in the milk. Clearance rates, however, are not readily available for most drugs. While these calculations have theoretical significance, they have little practical application in the clinical setting.

In general, only small amounts of medications that are acidic, water soluble, highly protein bound, and with low oral bioavailability pass into milk. Drugs of large molecular size (e.g., insulin, heparin) do not cross the membrane into the milk.

Because of the wide selection of therapeutic medications available today, the clinician can select an alternative medication for the mother if one drug is known to develop high levels in the milk. Antibiotics usually cross into breastmilk to some degree. In general, if the antibiotic is considered safe enough that it could be given directly to the infant, it is considered safe for the mother to use while breastfeeding. Tetracycline and chloramphenicol, for example, should be avoided when the nursing infant is under six months of age. Some antibiotics are not absorbed orally and must be given parenterally (aminoglycosides); thus, little is absorbed from the gastrointestinal track and no threat is posed to the infant receiving a small amount in the breastmilk.

Caffeine, however, is sometimes given directly to infants—especially premature infants—to stimulate them to breathe, but they are only dosed once a day at first because they do not clear it quickly. Thus, small amounts of caffeine consumed more than three to four times a day will accumulate in the infant after a few days and may cause irritability and wakefulness.⁹⁹

Information about a wide group of antihypertensive drugs indicates that a few of them

cross into the milk in high levels (e.g., nadolol, atenolol), while others appear at very low levels (captopril and metoprolol).^{100,101} AAP gives atenolol, nadolol, captopril, and metoprolol a rating of 6 (compatible with breastfeeding).

In assessing a specific woman's risk/benefit of breastfeeding her infant, it can be stated that, generally, most medications taken by the mother are considered safe. Those that are contraindicated are listed in tables 4 and 5. Otherwise, the mother should be encouraged to breastfeed, and the health care professional encouraged to seek information about any drug that the mother needs. Usually, the question about a medication comes after lactation is established. Time can be taken to evaluate the best medication to accomplish the therapeutic goal without compromising the infant.

For temporary treatment with a problem drug, the mother can pump and discard her milk during treatment. The infant will need to receive formula by cup or bottle during that time. Metronidazole (Flagyl) used for trichomonas vaginalis and amoebiasis is considered a problem when the infant is under three months of age, because the drug passes into milk.¹⁰² Instead of a 10-day course of therapy, it has been recommended that the drug be given in a 1- to 2-gram dose and that the milk be pumped and discarded for 12 to 24 hours. Metronidazole is occasionally used in newborns for serious infections.¹⁰³

While lists can be helpful in identifying the few compounds that are contraindicated, lack of knowledge about a compound should not be used as a reason to avoid breastfeeding. The health care professional who cares for the infant can determine the safety of the compound by reviewing the available data. The *Physician's Desk Reference* (PDR)¹⁰⁴ is not a reliable source because the manufacturers are required to say that a specific drug or compound is not recommended during lactation unless they have carried out extensive studies on lactating women and their breastfed infants. The PDR can provide information

about molecule size, pH, protein-binding, and other properties. Local poison control centers can also provide additional information, as can other sources (see Briggs⁸⁹ and Lawrence¹).

Street Drugs and Drugs of Abuse

Generally, drugs of abuse are contraindicated during breastfeeding. The AAP presents a list of such items in table 6. Although the contraindication of illicit drugs such as amphetamines, cocaine, heroin, marijuana, and phenylcyclidine is undisputed, universal agreement has not been reached concerning all of the agents on the list.

Tobacco

While tobacco use and smoking are never recommended, these can be viewed as a matter of risk/benefit ratio: the risk of some nicotine exposure versus the tremendous benefit of being breastfed. Formula-fed infants of mothers who smoke also excrete nicotine and cotinine in their urine. Infants who live in households where adults smoke have a higher incidence of pulmonary problems, especially infections and asthma.¹⁰⁵ Breastfeeding provides some protection from both infection and asthma; breastfed infants of smokers do better than those who are formula fed. Absorption of nicotine is greater from the respiratory tract than from breastmilk. The nicotine absorbed from milk is less than 5 percent of the average daily dose of the adult.¹⁰⁶ The nicotine levels in maternal serum reflect smoking technique and tend to increase with increased depth of inhalation and the number of puffs per cigarette.¹⁰⁶ The risk of sudden infant death syndrome (SIDS) is significantly higher in infants who are not breastfed and whose mothers smoke; in other words, breastfeeding is protective against SIDS when mothers smoke.¹⁰⁷

Smoking is not a contraindication to breastfeeding. Smoking may adversely affect milk volume, and women who smoke tend to wean sooner. No reports have been published

TABLE 6
Drugs of Abuse: Contraindicated During Breastfeeding*

Drug Reference	Reported Effect or Reasons for Concern
Amphetamine [†]	Irritability, poor sleeping pattern
Cocaine	Cocaine intoxication
Heroin	Tremors, restlessness, vomiting, poor feeding
Marijuana	Only one report in literature; no effect mentioned
Nicotine (smoking)	Shock, vomiting, diarrhea, rapid heart rate, restlessness, decreased milk production
Phencyclidine	Potent hallucinogen

*The Committee on Drugs strongly believes that nursing mothers should not ingest any compounds listed here. Not only are they hazardous to the nursing infant, but they are also detrimental to the physical and emotional health of the mother. This list is obviously not complete; no drug of abuse should be ingested by nursing mothers even though adverse reports may not be in the literature.

[†]Drug is concentrated in human milk.

Source: Adapted with permission from the American Academy of Pediatrics Committee on Drugs,⁷² table 2. Copyright American Academy of Pediatrics.

associating nicotine from breastmilk with infant health problems, according to the Institute of Medicine Subcommittee on Nutrition During Lactation.²⁹ Mothers who smoke should be urged not to smoke in the same room as the infant at any time and not to smoke within two hours of nursing the infant.

Alcohol

Alcohol (ethanol) presents another series of questions. In countries where, for centuries, alcoholic beverages such as wine and beer have been consumed with daily meals, breastfeeding is universal, and no apparent problems have been reported. More recently in the United States, studies have been reported regarding the effect on suckling infants when alcohol is present in the breastmilk. These studies involved the rapid consumption of 40 to 90 milliliters of absolute alcohol by lactating women, who served as their own controls.¹⁰⁸ Blood levels were drawn every 30 minutes for four hours, and levels in the milk paralleled the maternal blood levels. The milk was noted to smell of alcohol at peak levels, paralleling the concentration of alcohol in the milk, which peaked between 30 and 60 min-

utes post maternal ingestion. The infants were observed to suckle more frequently but consumed less milk in the presence of alcohol. The mothers had been unaware of any differences. Few women consume the volume of alcohol or drink with the speed established in these experiments.¹⁰⁹ Alcohol appears in milk if there is alcohol in the serum while nursing. Acetaldehyde, which is the major metabolite of ethanol and believed to be the major source of alcohol toxicity, does not appear in breastmilk.¹¹⁰

A study of one-year-old infants received considerable attention in the lay press in 1989, reporting a strong positive association between psychomotor development scores obtained with the Bayley Scales of Infant Development and an approximate measure for exposure to alcohol through breastfeeding.¹¹¹ The scores of infants of breastfeeding mothers who drank alcohol occasionally (e.g., one to two drinks per week) did not differ from those of infants breastfed by mothers who never drank. Infants of mothers who drank heavily (a six-pack of beer per day) showed slight gross motor delay at one year. No follow-up has been reported. It is important to note that these infants may well have

been exposed to alcohol in utero and may have been expressing effects of fetal alcohol syndrome. The study did not report details of confounding socioeconomic factors or deficits in maternal interactions, which also affect developmental parameters.

The American Academy of Pediatrics Committee on Drugs lists alcohol as usually compatible with breastfeeding.⁷² The Institute of Medicine Subcommittee on Nutrition During Lactation has concluded that no published scientific evidence demonstrates that consumption of alcoholic beverages has a beneficial impact on lactation performance.²⁹ The Committee on Drugs further suggests that if alcohol is used, intake should be limited to “no more than 0.5 grams of alcohol per kilogram of maternal body weight per day. . . . For a 60-kilogram (132-pound) woman, 0.5 grams of alcohol per kilogram of body weight corresponds to approximately 2 to 2.5 ounces of liquor, 8 ounces of table wine, or 2 cans of beer.”²⁹

Caffeine

Caffeine consumption is of national interest, and many caffeine-free beverages are available. Beverages that are naturally caffeine-free may differ from those that are decaffeinated. A study done in rats in Costa Rica suggests that other components of coffee itself—exclusive of caffeine—affect iron concentrations when volumes equivalent to three cups of coffee per day are consumed.¹¹² The chief concern with caffeine is related to the fact that infants in the first few weeks of life do not excrete caffeine rapidly.¹ Only small amounts of caffeine appear in breastmilk, but if the mother consumes considerable caffeine day after day, the caffeine accumulates in the infant. The infant becomes symptomatic (i.e., irritable, wakeful, jittery). Symptoms promptly abate with a decrease in caffeine consumption. Maternal consumption of one to two caffeine-containing beverages per day is not associated with problems.⁹⁹ As noted earlier, caffeine is sometimes given directly to infants (especially premature infants) to stimulate

them to breathe, but they are dosed only once a day at first because they do not clear the caffeine quickly.

Herbal and food products

With the blend of cultures and traditions, herbs and herbal teas have become more widely used. Much of the traditional and current use of these herbs surrounds pregnancy, childbirth, and lactation.¹¹³ While many herbal teas contain innocuous flavors, others contain pharmacologically active components that form the basis for folk medicine treatments. A number of natural herbs contain belladonna (atropine) and are recommended to create euphoria and ease pain. Other herbs contain naturally occurring coumarins, which, when taken to excess, can cause bruising and hemorrhage. Comfrey leaves have been a favorite of traditional midwifery but have been banned in Canada and other countries because of the association with veno-occlusive disease and hepatotoxicity.¹¹⁴

Licorice, garlic, and ginseng are other herbs with potent pharmacologic properties that enjoy great popularity among certain cultures, but that have been reported to have caused serious problems. Licorice in large amounts alters potassium levels.¹¹⁵ Garlic has caused serious burns when worn against the skin. Ginseng has been responsible for syncope and altered consciousness.¹¹⁶

The clinician should inquire about all foods and beverages when taking a medical history. If an herbal product is being taken in excessive amounts, the contents should be checked. Such “self-medication” has posed many problems and should be evaluated in the breastfeeding mother. The regional poison control center may be able to assist in identifying the active properties of most herbs. The medicinal use of herbs per se is not a contraindication to breastfeeding.

Environmental Contaminants

Environmental contamination of breastmilk has been investigated in many sites around the world. In general, chemicals that are lipophilic (dissolve in fat) are found in the lipid fraction of breastmilk. The risk of environmental contaminants in breastmilk is based on a woman's exposure to chemicals. The greater her exposure, the greater the levels in her milk. Women in Vietnam, Turkey, Japan, and Taiwan with high levels of chemicals were exposed to contaminated foodstuffs.¹¹⁷ Women currently at risk in this country may have had major exposure in an industrial accident. However, a spill of polychlorinated biphenyl in North Carolina did not result in increased levels in mothers' milk.¹¹⁸ In the lower Michigan Peninsula exposure, polybrominated biphenyls (PBBs) were unintentionally put in cattle feed, thus entering the food chain.¹¹⁹ More than 90 percent of the residents in this area, including pregnant and lactating women, had measurable amounts in their body fat and breastmilk. In the face of this information, however, few chose to wean their infants.

Herbicides

Agent Orange was a mixture of two pesticides: 2, 4-D and 2, 4, 5-T. The compound 2, 4, 5-T was contaminated during manufacture with 2, 3, 7, 8 TCDD, the best-known dioxin.¹²⁰ Agent Orange was widely used as an herbicide in Vietnam.¹²¹ Pooled milk samples from women with high-level exposure in Vietnam contained the dioxin. Although the original data from Vietnam were believed to be flawed technically, nursing infants are known to retain almost all of the 2, 3, 7, 8 substituted dioxins that they ingest from breastmilk. On a body weight basis, nursing infants have a dietary intake of TCDD and its equivalents that is 100 times greater than that of adults.¹²² Exposure of the fetus is also significant; however, transfer of dioxin-like compounds across the placenta is incomplete. Exposure of the general public is low, and

only industrial workers exposed to dioxins are believed to be at risk for any absorption.¹²³ Very few workers are exposed to TCDD now. Because testing is still extremely costly, a woman with an inordinate exposure in industry should not breastfeed, but the magnitude of the exposure should first be verified.¹²⁴ Exposure to TCDD is not a general concern for breastfeeding women.

Pesticides

The levels of DDT and other insecticides in breastmilk vary with exposure.¹²⁵ Since DDT was banned in the United States in 1972, the threat to the average citizen has become minimal. In developing countries, the risk continues in rural areas among agricultural workers. In India, China, Guatemala, and Mexico, rural women have high levels of exposure. The World Health Organization has established pesticide residues limits and recommends a maximum average daily intake (ADI) of DDT and its metabolites of less than 20 micrograms/kilogram body weight from all sources.

From a practical standpoint in the United States, the average woman is not considered at risk for excessive levels of DDT in her breastmilk.^{124,126} If there is a possibility of heavy environmental contamination with these compounds, the situation should be discussed with the physician, and, when appropriate, testing can be arranged through a state-approved laboratory before recommending whether the mother should breastfeed. Breastmilk is not considered a major source of DDT by the World Health Organization.

Dichlorodiphenyldichloroethylene (DDE) is the most stable derivative of the pesticide DDT. DDE has been associated with shortened duration of lactation in the general population in North Carolina.¹¹⁸ A follow-up study was conducted in Mexico, where relatively high DDE levels exist.¹²⁷ The authors concluded that DDE may affect women's ability to lactate and postulated that this exposure

may contribute to lactation failure in parts of the world where DDT and DDE are prevalent.

Polychlorinated biphenyls (PCBs) and furans in pregnant Japanese and Taiwanese women who were heavily exposed to contamination produced small-for-gestational-age infants with transient darkening of the skin ("cola babies"). Polybrominated biphenyls (PBBs) are similar compounds and have been associated with a one-time heavy exposure to farm animals through contaminated cattle feed in the lower Michigan Peninsula in 1975.¹¹⁹ Women in the United States with the greatest risk of high exposure to PCBs or PBBs have worked with or eaten excessive amounts of fish from sport fishing in contaminated waters.¹

Studies have refuted earlier observations of concern. No information is available in the United States concerning the levels of polychlorinated dibenzodioxins (PCDDs) or polychlorinated dibenzofurans (PCDFs) in anglers who consume a great deal of fish.¹²⁸ Others considered by some to be at high risk live near a waste disposal site or have been involved in environmental spills. Except in cases of unusually heavy exposure, however, there is no contraindication to breastfeeding. When there is a question about environmental exposure and safety of breastfeeding, the state health department can be consulted for specific advice or to measure plasma and breastmilk levels. The epidemiologists usually are aware of the risks in a given geographic area and know whether it is necessary to measure breastmilk levels once lactation is fully established. If this sampling is planned far in advance during the pregnancy, little time need be lost. Unless the exposure is unique and excessive, the infant can be breastfed until levels are returned from the laboratory.¹

Several extensive reviews have been published concerning the dilemma of pollutants in breastmilk.^{118,126,129,130} It has been suggested that the body burden at birth can be added to by exposing the infant to small levels in the milk, which may indeed exceed the allowable

exposure limits for daily intake, set by the World Health Organization.¹³¹ Breastmilk levels are used epidemiologically as markers of human exposure within a community's exposure because of the close correlation between breastmilk levels and levels in the fat stores. Randomly selected mothers in the Great Lakes region were tested by the state of New York in 1978, and no chemical (PCB, PBB) was found in any breastmilk in a random sampling of residents. Thus, unless the circumstances are unusual, breastfeeding should not be abandoned on the basis of insecticide contamination.¹

The cyclodiene pesticides and their metabolites detected in breastmilk include aldrin, dieldrin, endrin, heptachlor and its epoxide, chlordane, oxychlordane, and trans-nonachlor. The most abundant and widespread compounds are dieldrin and heptachlor epoxide.¹²⁰ Their levels in breastmilk, however, are very much lower than those of DDT, and only a fraction of women have levels above the detection limit.¹²⁰ According to Jensen, measurable amounts of aldrin and heptachlor in breastmilk samples are contrary to the fact that these chemicals are transformed to epoxide derivatives (e.g., aldrin to dieldrin) in living organisms and ecosystems.¹²⁵ These substances are persistent organo chlorine insecticides of higher toxicity than DDT and have been banned in industrialized countries for over a decade. The only source that might remain is from foodstuffs imported from Third World countries.¹²⁴ In the United States, levels in breastmilk have dropped and are reported undetectable.¹²⁰ Heptachlor and its epoxide, which have been limited to use in some southern states for termite eradication, have decreased in importance and have not been reported in breastmilk in this country within the last decade.

Technical chlordane, a mixture of 26 compounds, is common in termite control in the southern United States. Oxychlordane and trans-nonachlor have been detected in breastmilk in some regions, including the southeastern United States (0.08 parts per million),

Hawaii, and the Binghamton area of New York State (minimal amount, one pool of seven donors). The most recent measurements were reported in 1985.^{120,125,132} In the 1990s, the general public in the United States is not at risk for exposure to the cyclodiene pesticides.

Heavy Metals

Heavy metal exposure such as lead, mercury, arsenic, and cadmium can be related to water supplies, cow milk, and even infant formulas.¹³³ Typically, breastfed infants are exposed to lower amounts than formula-fed infants because formula is mixed with water that may contain the heavy metal. Lead is a heavy metal that still exists in the environment in older housing, lead pipes, certain industries, and auto exhaust pollutants.

Lead

Lead levels reported from the Third National Health and Nutrition Examination Survey (NHANES III) in 1988–94, compared to NHANES I (1976–75) and NHANES II (1976–80), reveal a drop across all ages.¹³⁴ It is presumed that eliminating leaded gasoline and removing lead solder from food and soft drink cans have been responsible for this decrease, along with removing lead-based paint. Low-income Hispanic and African-American children living in major cities have the highest lead levels (≥ 10 micrograms/deciliter).¹³⁴

In the United States, the extensive lead screening program for children has identified individuals before they are symptomatic and has also identified women in their childbearing years because they live in the same environment as children with elevated levels of lead.¹³⁵ More women are asking the question: Is it safe for me to breastfeed? Generally, the answer has been: If the blood lead level is less than 40, it is safe to breastfeed because the levels of lead in the milk will be low or undetectable. Considerably less lead passes into

the breastmilk than across the placenta.¹³⁶ Infants who have been exposed in utero can be expected to lose lead if their daily intake via breastmilk is less than 5 micrograms per day.¹³⁷ If a woman has an elevated lead level, it is wise to measure the infant's serum and the milk, even if the maternal level is less than 40 micrograms/deciliter. Milk levels are one-tenth to one-fifth of maternal levels. County or state health department laboratories usually have lead screening programs. The home environment should be evaluated if the mother's level is above 10 micrograms/deciliter, and a program to reduce the mother's level of lead should be initiated. In studies comparing feeding methods, formula-fed infants have higher lead levels than breastfed infants.¹⁰⁰ Breastfeeding is not contraindicated unless the maternal level of lead exceeds 40 micrograms/deciliter.¹³⁴

Mercury

Mercury was a major contaminant in the Iraqi wheat exposure, and also in some parts of the Great Lakes from industrial exposure in the 1970s.^{138,139} Exposure of the general public is limited to industrial exposure of specific workers to organic mercury, and dietary exposure to organic mercury (usually methyl mercury) from seafood. Amalgam from dental fillings is a small exposure for many in the United States. A freak exposure occurred when a metallic mercury spill from a large thermometer was cleaned up with the family vacuum cleaner. The mercury remained in the dust bag and was gradually vaporized and inhaled by the family each time the vacuum was used. Most exposures are identified because symptoms develop.

The neurodevelopmental study of Seychellois children following in utero exposure to methyl mercury from a maternal fish diet showed no association between maternal hair mercury level during pregnancy and an adverse neurodevelopmental outcome of the infant at six months.¹⁴⁰ At 19 and 29 months after the subjects' births, the results showed possible association between high levels of

TABLE 7
Summary of Medical Contraindications to Breastfeeding in the United States

Problem	OK to Breastfeed in U.S.?	Conditions
INFECTIOUS DISEASES		
Acute infectious disease	Yes	Respiratory, reproductive, gastrointestinal infections
HIV	No	HIV positive
Active tuberculosis	Yes	After mother has received 2 or more weeks of treatment
Hepatitis		
Hepatitis A	Yes	As soon as mother receives gamma globulin
Hepatitis B	Yes	After infant receives HBIG, first dose of hepatitis B vaccine should be given before hospital discharge
Hepatitis C	Yes	If no co-infections (e.g., HIV)
Venereal warts	Yes	
Herpes viruses		
Cytomegalovirus	Yes	
Herpes simplex	Yes	Except if lesion on breast
Varicella-zoster (chicken pox)	Yes	As soon as mother becomes noninfectious
Epstein-Barr	Yes	
Toxoplasmosis	Yes	
Mastitis	Yes	
Lyme disease	Yes	As soon as mother initiates treatment
HTLV-1	No	
MEDICATION/PRESCRIPTION DRUGS AND STREET DRUGS		
Antimetabolites (see table 4)	No	
Radiopharmaceuticals (see table 5)		
Diagnostic dose	Yes	After radioactive compound has cleared mother's plasma
Therapeutic dose	No	
Drugs of abuse (see table 6)	No	Exceptions: cigarettes, alcohol
Other medications	Yes	Drug-by-drug assessment
ENVIRONMENTAL CONTAMINANTS		
Herbicides	Usually	Exposure unlikely (except workers heavily exposed to dioxins)
Pesticides		
DDT, DDE	Usually	Exposure unlikely
PCBs, PBBs	Usually	Levels in milk very low
Cyclodiene pesticides	Usually	Exposure unlikely
Heavy metals		
Lead	Yes	Unless maternal level ≥ 40 mg/dL
Mercury	Yes	Unless mother symptomatic and levels measurable in breastmilk
Cadmium	Usually	Exposure unlikely
Radionuclides	Yes	Risk greater to bottlefed infants

Note: This table provides a brief summary. Each situation must be decided individually. Contraindications are rare in the United States.

exposure and activity levels in males, with other parameters being unrelated to mercury levels. This study involved a population in which 90 percent were breastfed in the first week of life and 50 percent were still being breastfed at 6 months. The breastfeeding correlations have not been analyzed at this time.¹⁴⁰ However, there were no adverse outcomes related to mercury.

Cadmium

Cadmium has been measured in fetuses in Japan, where cadmium intake is higher, presumably from industrial exposure, heavy smoking, and exposure from contaminated rice. No clear-cut cases of cadmium exposure through breastmilk have been reported.¹²² Itai-Itai disease is believed to be due to cadmium, but it may have other etiologies. Cadmium exposure has not been an issue in the United States; the major concern related to cadmium intake is cigarette smoke. Heavy metals are not a usual risk for breastfed infants. Any woman with an exposure should be evaluated by her physician. Heavy metals are rarely a contraindication for breastfeeding, and only under special circumstances of exposure.¹⁴¹

Radionuclides

Radionuclides have been followed environmentally since the nuclear age began. The deposition of strontium in the deciduous teeth of infants in St. Louis was much greater in formula-fed infants than in breastfed infants in 1964. In the aftermath of the Chernobyl nuclear explosion, breastmilk was found to be lower in strontium 90 and iodine 131 than cow milk and other parts of the food chain and the water supply.¹⁴²

In summary, in the United States, except under unusual circumstances of environmental exposure in individual cases, breastfeeding is not contraindicated because of environmental hazards and may be safer than formula mixed with water.

Conclusion

As stated in the introduction, breastmilk provides more than just good nutrition—its unique composition provides the ideal nutrients for human brain growth and protects the infant against infection. Breastfeeding has distinct, species-specific, irreplaceable value that is ideal for the infant's growth, development, and emotional well-being. It is important, however, for health care professionals to be aware of those rare situations when the mother should be counseled not to breastfeed. Table 7 summarizes the information presented in this paper concerning medical contraindications to breastfeeding in the United States. Breastmilk should not be withheld from any infant unless absolutely necessary.

References

1. Lawrence RA. 1994. *Breastfeeding: A Guide for the Medical Profession* (4th ed.). St. Louis, MO: C.V. Mosby Company.
2. Cunningham AS, Jelliffe DB, Jelliffe EFP. 1991. Breast-feeding and health in the 1980s: A global epidemiologic review. *Journal of Pediatrics* 118:659-666.
3. Hanson LA, Adlerberth I, Carlsson B, Castrignano SB, Dahlgren U, Jalil F, Khan SR, Mellander L, Eden CS, Svennerholm AM, et al. 1989. Host defense of the neonate and the intestinal flora. *Acta Paediatrica Scandinavica* 351(Suppl.):122-125.
4. Pisacane A, Graziano L, Zona G, Dolezalova H, Cafiero M, Coppola A, Scarpellino B, Ummarino M, Mazarella G. 1994. Breast feeding and acute lower respiratory infection. *Acta Paediatrica* 83:714-718.
5. Beudry M, Dufour R, Marcoux S. 1995. Relation between infant feeding and infections during the first six months of life. *Journal of Pediatrics* 126:191-197.
6. Victora CG, Smith PG, Vaughan JP, Nobre LC, Lombardi C, Teixeira AM, Fuchs SM, Moreira LB, Gigante LP, Barros FC. 1987. Evidence for protection by breastfeeding against infant deaths from infectious diseases in Brazil. *Lancet* 2(8554):319-322.
7. Burr ML, Limb ES, Maguire MJ, Amarah L, Eldridge BA, Layzell JC, Merrett TG. 1993. Infant feeding, wheezing, and allergy: A prospective study. *Archives of Disease in Childhood* 68:724-728.

8. Dewey KG, Heinig MJ, Nommsen LA, Peerson JM, Lonnerdal B. 1992. Growth of breast-fed and formula-fed infants from 0 to 18 months: The DARLING Study. *Pediatrics* 89(6, Pt. 1):1035-1041.
9. Dewey KG, Peerson JM, Brown KH, Krebs NF, Michaelsen KF, Persson LA, Salmenpera L, Whitehead RG, Yeung DL. 1995. Growth of breast-fed infants deviates from current reference data: A pooled analysis of US, Canadian, and European data sets. World Health Organization Working Group on Infant Growth. *Pediatrics* 96(3, Pt. 1):495-503.
10. *HIV and breast-feeding* [press release, World Health Organization, No. 30]. 1992, May 4. Geneva, Switzerland: World Health Organization.
11. Davis MK, Savitz DA, Graubard BI. 1988. Infant feeding in childhood cancer. *Lancet* 2(8607):365-368.
12. Alho OP, Koivu M, Sorri M, Rantakallio P. 1990. Risk factors for recurrent acute otitis media and respiratory infection in infancy. *International Journal of Pediatric Otorhinolaryngology* 19:151-161.
13. Aniansson G, Alm B, Andersson B, Hakansson A, Larsson P, Nysten O, Peterson H, Rigner P, Svanborg M, Sabharwal H, et al. 1994. A prospective cohort study on breastfeeding and otitis media in Swedish infants. *Pediatric Infectious Disease Journal* 13:183-188.
14. Lawrence R. 1995. The clinician's role in teaching proper infant feeding techniques. *Journal of Pediatrics* 126:S112-S117.
15. Virtanen SM, Räsänen L, Aro A, Lindstrom J, Sippola H, Lounamaa R, Toivanen L, Tuomilehto J, Akerblom HK. 1991. Infant feeding in Finnish children less than 7 years of age with newly diagnosed IDDM. Childhood Diabetes in Finland Study Group. *Diabetes Care* 14:415-417.
16. Koletzko S, Sherman P, Corey M, Griffiths A, Smith C. 1989. Role of infant feeding practices in development of Crohn's Disease in childhood. *BMJ* 298:1617-1618.
17. Merrett TG, Burr ML, Butland BK, Merrett J, Miskelly FG, Vaughan-Williams E. 1988. Infant feeding and allergy: 12-month prospective study of 500 babies born into allergic families. *Annals of Allergy* 61:13-20.
18. Gruskay FL. 1982. Comparison of breast, cow and soy feedings in the prevention of onset of allergic disease: A 15-year prospective study. *Clinical Pediatrics* 21:486-491.
19. Kern RA. 1939. Prophylaxis in allergy. *Annals of Internal Medicine* 12:1175-1188.
20. Burr ML, Limb ES, Maguire MJ, Amarah L, Eldridge BA, Layzell JC, Merrett TG. 1993. Infant feeding, wheezing and allergy: A prospective study. *Archives of Disease in Childhood* 68:724-728.
21. Bryant CA. 1986. *Overcoming Breastfeeding Barriers*. Paper presented at U.S. Department of Health and Human Services Region IV nutrition conference, Building Support Networks for Breastfeeding, Atlanta, GA.
22. Gussler JD, Bryant CA, eds. 1984. *Helping Mothers to Breastfeed: Program Strategies for Minority Communities*. Lexington, KY: Nutrition and Health Education division, Lexington-Fayette County Health Department.
23. Newton N. 1971. Psychological differences between breast and bottle feeding. *American Journal of Clinical Nutrition* 24:993-1004.
24. Lucas A, Morley R, Cole TJ, Lister G, Leeson-Payne C. 1992. Breast milk and subsequent intelligence quotient in children born preterm. *Lancet* 339:261-264.
25. Johnson DL, Swank PR, Howie VM, Baldwin CD, Owen M. 1996. Breastfeeding and children's intelligence. *Psychological Reports* 79:1179-1185.
26. Neuringer M, Reisbick S, Janowsky J. 1994. The role of n-3 fatty acids in visual and cognitive development: Current evidence and methods of assessment. *Journal of Pediatrics* 125:S39-S47.
27. Jorgensen MH, Hernell O, Lund P, Holmer G, Michaelsen KF. 1996. Visual acuity and erythrocyte docosahexaenoic acid status in breast-fed and formula-fed term infants during the first four months of life. *Lipids* 31:99-105.
28. Jonsbo F, Jorgensen MH, Michaelsen KF. 1995. The importance of n-3 and n-6 fatty acids for visual function and development in newborn infants. *Ugeskrift for Laeger* 157:1987-1991.
29. National Academy of Sciences, Institute of Medicine, Food and Nutritional Board, Committee on Nutritional Status During Pregnancy and Lactation, Subcommittee on Nutrition During Lactation. 1991. *Nutrition During Lactation: Summary, Conclusions, and Recommendations*. Washington, DC: National Academy Press.
30. Byers T, Graham S, Rzepka T, Marshall J. 1985. Lactation and breast cancer. Evidence for a negative association in premenopausal women. *American Journal of Epidemiology* 121:664-674.
31. MacMahon B, Lin TM, Lowe CR, Mirra AP, Ravnihar B, Salber EJ, Trichopoulos D, Valaoras VG, Yuasa S. 1970. Lactation and cancer of the breast: A summary of an international study. *Bulletin of the World Health Organization* 42:185-194.
32. Sowers MF, Corton G, Shapiro B, Jannausch ML, Crutchfield M, Smith ML, Randolph JF, Hollis B. 1993. Changes in bone density with lactation. *JAMA* 269:3130-3135.

33. Rebuffe-Scrive M, Enk L, Crona N, Lonnroth L, Abrahamsson L, Smith U, Bjorntorp P. 1985. Fat cell metabolism in different regions in women. Effect of menstrual cycle, pregnancy, and lactation. *Journal of Clinical Investigation* 75:1973–1976.
34. Whittemore AS. 1994. Characteristics relating to ovarian cancer risk: Implications for prevention and detection. *Gynecologic Oncology* 55(3, Pt. 2):S15–S19.
35. Rosenblatt KA, Thomas DB. 1993. Lactation and the risk of epithelial ovarian cancer. The WHO Collaborative Study of Neoplasia and Steroid Contraceptives. *International Journal of Epidemiology* 22:192–197.
36. John EM, Whittemore AS, Harris R, Itnyre J. 1993. Characteristics relating to ovarian cancer risk: Collaborative analysis of seven U.S. case-control studies. Epithelial ovarian cancer in black women. Collaborative Ovarian Cancer Group. *Journal of the National Cancer Institute* 85:142–147.
37. Newcomb PA, Storer BE, Longnecker MP, Mittendorf R, Greenberg ER, Clapp RW, Burke KP, Willett WC, MacMahon B. 1994. Lactation and a reduced risk of premenopausal breast cancer. *New England Journal of Medicine* 330:81–87.
38. Brinton LA, Potischman NA, Swanson CA, Shoenberg JB, Coates RJ, Gammon MD, Malone KE, Stanford JL, Daling JR. 1995. Breastfeeding and breast cancer risk. *Cancer Causes and Control* 6:199–208.
39. Melton LJ III, Bryant SC, Wahner HW, O'Fallon WM, Malkasian GD, Judd HL, Riggs BL. 1993. Influence of breastfeeding and other reproductive factors on bone mass later in life. *Osteoporosis International* 3:76–83.
40. Kalkwarf HJ, Specker BL. 1995. Bone mineral loss during lactation and recovery after weaning. *Obstetrics and Gynecology* 86:26–32.
41. Kalkwarf HJ, Specker BL, Heubi JE, Viera NE, Yergey AL. 1996. Intestinal calcium absorption of women during lactation and after weaning. *American Journal of Clinical Nutrition* 63:526–531.
42. Cross NA, Hillman LS, Allen SH, Krause GF, Vieira NE. 1995. Calcium homeostasis and bone post-weaning: A longitudinal study. *American Journal of Clinical Nutrition* 61:514–523.
43. Clark BJ. After a positive Guthrie—what next? Dietary management for the child with phenylketonuria. 1992. *European Journal of Clinical Nutrition* 46 (Suppl. 1):S33–S39.
44. Ernest AE, McCabe ERB, Neifert MR, O'Flynn ME. 1980. *Guide to Breastfeeding the Infant with PKU* (DHHS Publication No. 79-5110). Washington, DC: U.S. Government Printing Office.
45. Thomas MR, Kawamoto J. 1979. Dietary evaluation of lactating women with or without vitamin and mineral supplementation. *Journal of the American Dietetic Association* 74:669–672.
46. Dusdieker LB, Booth BM, Stumbo PJ, Eichenberger JM. 1985. Effect of supplemental fluids on human milk production. *Journal of Pediatrics* 106:207–211.
47. Prentice AM, Roberts SB, Prentice A, Paul AA, Watkinson M, Watkinson AA, Whitehead RG. 1983. Dietary supplementation of lactating Gambian women. I. Effect on breast-milk volume and quality. *Human Nutrition Clinical Nutrition* 37:53–64.
48. Rasmussen KM. 1988. Maternal nutritional status and lactational performance. *Clinical Nutrition* 7:147–155.
49. Rasmussen KM, Habicht JP. 1989. Malnutrition among women: Indicators to estimate prevalence. *Food and Nutrition Bulletin* 11:29–37.
50. Herbert VD, Colman N. 1988. Folic acid and vitamin B₁₂. In ME Shils, VR Young, eds., *Modern Nutrition in Health and Disease*. Philadelphia, PA: Lea and Febiger.
51. Sneed SM, Zane C, Thomas MR. 1981. The effects of ascorbic acid, vitamin B₆, vitamin B₁₂, and folic acid supplementation on the breast milk and maternal nutritional status of low socioeconomic lactating women. *American Journal of Clinical Nutrition* 34:1338–1346.
52. Greer FR, Tsang RC, Levin RS, Searcy JE, Wu R, Steichen JJ. 1982. Increasing serum calcium and magnesium concentrations in breast-fed infants: Longitudinal studies of minerals in human milk and in sera of nursing mothers and their infants. *Journal of Pediatrics* 100:59–64.
53. American Academy of Pediatrics, Committee on Infectious Diseases. 1997. *1997 Red Book: Report of the Committee on Infectious Diseases*. Elk Grove Village, IL: American Academy of Pediatrics.
54. Hanson LA, Ahlstedt S, Andersson B, Carlsson B, Fallstrom SP, Mellander L, Porras O, Soderstrom T, Eden CS. 1985. Protective factors in milk and the development of the immune system. *Pediatrics* 75:172–176.
55. Cooperstock M, Zedd AJ. 1983. Intestinal flora of infants. In DJ Hentges, ed., *Human Intestinal Microflora in Health and Disease* (pp. 79–99). New York, NY: Academic Press.
56. Goldman AS. 1993. The immune system of human milk: Antimicrobial, anti-inflammatory, and immunomodulating properties. *Pediatric Infectious Disease Journal* 12:664–671.
57. Ruff AJ. 1994. Breast milk, breastfeeding, and transmission of viruses to the neonate. *Seminars in Perinatology* 18:510–516.

58. Van de Perre P, Lepage P, Homsy J, Dabis F. 1992. Mother-to-infant transmission of human immunodeficiency virus by breast milk: Presumed innocent or presumed guilty? *Clinical Infectious Diseases* 15:502–507.
59. Oxtoby MJ. 1988. Human immunodeficiency virus and other viruses in human milk: Placing the issues in broader perspective. *Pediatric Infectious Disease Journal* 7:825–835.
60. Palasanthiran P, Ziegler JB, Stewart GJ, Stuckey M, Armstrong JA, Cooper DA, Penny R, Gold J. 1993. Breast-feeding during primary maternal human immunodeficiency virus infection and risk of transmission from mother to infant. *Journal of Infectious Diseases* 167:441–444.
61. Ruff AJ, Coberly J, Halsey NA, Boulos R, Desormeaux J, Burnley A, Joseph DL, McBrien M, Quinn T, Losikoff P, et al. 1994. Prevalence of HIV-1 DNA and p24 antigen in breast milk and correlation with maternal factors. *Journal of Acquired Immune Deficiency Syndromes* 7:68–73.
62. Del Fante P, Jenniskens F, Lush L, Morona D, Moeller B, Lanata CF, Hayes R. 1993. HIV, breast-feeding and under 5 mortality: Modelling the impact of policy decisions for or against breast-feeding. *Journal of Tropical Medicine and Hygiene* 96:203–211.
63. Connor EM, Mofenson LM. 1995. Zidovudine for the reduction of perinatal human immunodeficiency virus transmission: Pediatric AIDS Clinical Trials Group Protocol 076—Results and treatment recommendations. *Pediatric Infectious Disease Journal* 14:536–541.
64. Cutting WA. 1994. Breast-feeding and HIV: A balance of risks. *Journal of Tropical Pediatrics* 40:6–11.
65. Davis MK. 1991. Human milk and HIV infection: Epidemiologic and laboratory data. In J Mestecky et al, eds., *Immunology of Milk and the Neonate* (p. 271). New York, NY: Plenum Press.
66. Ziegler JB, Cooper DA, Johnson RO, Gold J. 1985. Postnatal transmission of AIDS-associated retrovirus from mother to infant. *Lancet* 1(8434):896–898.
67. Newburg DS, Linhardt RJ, Ampofo SA, Yolken RH. 1995. Human milk glycosaminoglycans inhibit HIV glycoprotein gp 120 binding to its host cell CD4 receptor. *Journal of Nutrition* 125:419–424.
68. de Martino M, Tovo PA, Tozzi AE, Pezzotti P, Galli L, Livadiotti S, Caselli D, Massiromi E, Ruga E, Fioredda F, et al. 1992. HIV-1 transmission through breast-milk: Appraisal of risk according to duration of feeding. *AIDS* 6:991–997.
69. Snider DE Jr, Powell KE. 1984. Should women taking antituberculosis drugs breast-feed? *Archives of Internal Medicine* 144:589–590.
70. Holdiness MR. 1984. Antituberculosis drugs and breast-feeding [letter]. *Archives of Internal Medicine* 144:1888.
71. Holdiness MR. 1984. Clinical pharmacokinetics of the antituberculosis drugs. *Clinical Pharmacokinetics* 9:511–544.
72. American Academy of Pediatrics Committee on Drugs. 1994. The transfer of drugs and other chemicals into human milk. *Pediatrics* 93:137–150.
73. Lin HH, Kao JH, Hsu HY, Ni YH, Chang MH, Huang SC, Hwang LH, Chen PS, Chen DS. 1995. Absence of infection in breast-fed infants born to hepatitis C virus-infected mothers. *Journal of Pediatrics* 126:589–591.
74. Weiland O, Schvarcz R. 1992. Hepatitis C: Virology, epidemiology, clinical course, and treatment. *Scandinavian Journal of Gastroenterology* 27:337–342.
75. Ohto H, Terazawa S, Sasaki N, Hino K, Ishiwata C, Kako M, Ujiie N, Endo C, Matsui A, et al. 1994. Transmission of hepatitis C virus from mothers to infants. *New England Journal of Medicine* 330:744–750.
76. Gürakan B, Oran O, Yigit S. 1994. Vertical transmission of Hepatitis C virus [letter]. *New England Journal of Medicine* 331:399.
77. Nagata I, Shiraki K, Tanimoto K, Harada Y, Tanaka Y, Okada T. 1992. Mother-to-infant transmission of Hepatitis C virus. *Journal of Pediatrics* 120:432–434.
78. Ogasawara S, Kage M, Kosai K, Shimamatsu K, Kojiro M. 1993. Hepatitis C virus RNA in saliva and breastmilk of hepatitis C carrier mothers [letter]. *Lancet* 341:561.
79. Zanetti AR, Tanzi E, Paccagnini S, Principi N, Pizzocola G, Caccamo ML, D'Amico E, Cambie G, Vecchi L. 1995. Mother-to-infant transmission of hepatitis C virus. Lombardy Study Group on Vertical HCV Transmission. *Lancet* 345:289–291.
80. Alter MJ. 1994. Transmission of hepatitis C virus—Route, dose, and titer. *New England Journal of Medicine* 330:784–786.
81. Dworsky M, Yow M, Stagno S, Pass, RF, Alford C. 1983. Cytomegalovirus infection of breast milk and transmission in infancy. *Pediatrics* 72:295–299.
82. Yeager AS, Palumbo PE, Malachowski N, Ariagno RL, Stevenson DK. 1983. Sequelae of maternally derived cytomegalovirus infections in premature infants. *Journal of Pediatrics* 102:918–922.
83. Quinn PT, Lofberg JV. 1978. Maternal herpetic breast infection: Another hazard of neonatal herpes simplex. *Medical Journal of Australia* 2:411–412.
84. Sullivan-Bolyai JZ, Fife KH, Jacobs RF, Miller Z, Corey L. 1983. Disseminated neonatal herpes simplex virus type I from maternal breast lesion. *Pediatrics* 71:455–457.

85. Gershon AA. 1990. Chickenpox, measles and mumps. In JS Remington, JO Klein, eds., *Infectious Diseases of the Fetus and Newborn Infant* (3rd ed.). Philadelphia, PA: WB Saunders.
86. Remington JS, Desmonts G. 1990. Toxoplasmosis. In JS Remington, JO Klein, eds., *Infectious Diseases of the Fetus and Newborn Infant* (3rd ed.). Philadelphia, PA: WB Saunders.
87. Matheson I, Aursnes I, Horgen M, Aabo O, Melby K. 1988. Bacteriological findings and clinical symptoms in relation to clinical outcome in puerperal mastitis. *Acta Obstetrica et Gynecologica Scandinavica* 67:723-726.
88. Thomsen AC. 1982. Infectious mastitis and occurrence of antibody-coated bacteria in milk. *American Journal of Obstetrics and Gynecology* 144:350-351.
89. Briggs GG, Freeman RK, Yaffe SJ. 1994. *Drugs in Pregnancy and Lactation* (4th ed.). Baltimore, MD: Williams and Wilkins.
90. Stiernstedt G. 1990. Lyme borreliosis during pregnancy. *Scandinavian Journal of Infectious Diseases*. 71(Suppl.):99-100.
91. Schmidt BL, Aberer E, Stockenhuber C, Klade H, Breier F, Luger A. 1995. Detection of *Borrelia burgdorferi* DNA by polymerase chain reaction in the urine and breast milk of patients with Lyme borreliosis. *Diagnostic Microbiology and Infectious Disease* 21:121-128.
92. Ando Y, Saito K, Nakano S, Kakimoto K, Furuki K, Tanigawa T, Hashimoto H, Moriyama I, Ichijo M, Toyama T. 1989. Bottle-feeding can prevent transmission of HTLV-1 from mothers to their babies. *Journal of Infection* 19:25-29.
93. Hino S. 1989. Milk-borne transmission HTLV-1 as a major route in the endemic cycle. *Acta Paediatrica Japonica* 31:428-435.
94. Wilson JT. 1983. Determinants and consequences of drug excretion in breast milk. *Drug Metabolism Reviews* 14:619-652.
95. Wilson JT, Brown RD, Cherek DR, Dailey JW, Hilman B, Jobe PC, Manno BR, Manno JE, Redetzki HM, Stewart JJ. 1980. Drug excretion in human milk: Principles, pharmacokinetics and projected consequences. *Clinical Pharmacokinetics* 5:1-66.
96. Wilson JT, Brown RD, Hinson JL, Dailey JW. 1985. Pharmacokinetic pitfalls in the estimation of the breast milk/plasma ratio for drugs. *Annual Review of Pharmacology and Toxicology* 25:667-689.
97. Peterson RG, Bowes WA Jr. 1983. Drugs, toxins and environmental agents in breast milk. In MC Neville, MR Neifert, eds., *Lactation, Physiology, Nutrition, and Breastfeeding*. New York, NY: Plenum Press.
98. Huxtable RJ. 1992. The myth of beneficent nature: The risks of herbal preparations. *Annals of Internal Medicine* 117:165-166.
99. Rivera-Calimlim L. 1987. The significance of drugs in breast milk. Pharmacokinetic considerations. *Clinics in Perinatology* 14:51-70.
100. Devlin RG, Duchin KL, Fleiss PM. 1981. Nadolol in human serum and breast milk. *British Journal of Clinical Pharmacology* 12:393-396.
101. Devlin RG, Fleiss PM. 1981. Captopril in human blood and breast milk. *British Journal of Clinical Pharmacology* 21:110-113.
102. Erickson SH, Oppenheim GL, Smith GH. 1981. Metronidazole in breast milk. *Obstetrics and Gynecology* 57:48-50.
103. Heisterberg L, Branbjerg PE. 1983. Blood and milk concentrations of metronidazole in mothers and infants. *Journal of Perinatal Medicine* 11:114-120.
104. *Physicians' Desk Reference* (49th ed.). 1995. Montvale, NJ: Medical Economics Data Production Company, Medical Economics Company, Inc.
105. Schulte-Hobein B, Schwartz-Bickenbach D, Abt S, Plum C, Nau H. 1992. Cigarette smoke exposure and development of infants throughout the first year of life: Influence of passive smoking and nursing on cotinine levels in breast milk and infant's urine. *Acta Paediatrica* 81:550-557.
106. Steldinger R, Luck W, Nau H. 1988. Half lives of nicotine in milk of smoking mothers: Implications for nursing [letter]. *Journal of Perinatal Medicine* 16:261-262.
107. Klonoff-Cohen HS, Edelstein SH, Lefkowitz ES, Srinivasan IP, Kaegi D, Chang JC, Wiley, KJ. 1995. The effect of passive smoking and tobacco exposure through breast milk on sudden infant death syndrome. *JAMA* 273:795-798.
108. Mennella JA, Beauchamp GK. 1991. The transfer of alcohol to human milk: Effect on flavor and the infant's behavior. *New England Journal of Medicine* 325:981-985.
109. Jones AW. 1992. Alcohol in mother's milk. *New England Journal of Medicine* 326:766-767.
110. Kesäniemi YA. 1974. Ethanol and acetaldehyde in the milk and peripheral blood of lactating women after ethanol administration. *Journal of Obstetrics and Gynaecology of the British Commonwealth* 81:84-86.
111. Little RE, Anderson KW, Ervin CH, Worthington-Roberts B, Clarren SK. 1989. Maternal alcohol use during breast-feeding and infant mental and motor development at one year. *New England Journal of Medicine* 321:425-430.

112. Neville MC, Walsh CT. 1995. Effects of xenobiotics on milk secretion and composition. *American Journal of Clinical Nutrition* 61(Suppl. 3):687S–694S.
113. Stuart M, ed. 1979. *The Encyclopedia of Herbs and Herbalism*. New York, NY: Crescent Books.
114. Dubick MA. 1986. Historical perspectives on the use of herbal preparations to promote health. *Journal of Nutrition* 116:1348–1354.
115. Davis EA, Morris DJ. 1991. Medicinal uses of licorice through the millennia: The good and plenty of it. *Molecular and Cellular Endocrinology* 78:1–6.
116. Ridker PM. 1987. Toxic effects of herbal teas. *Archives of Environmental Health* 42:133–136.
117. Rogan WJ, Ragan NB. 1994. Chemical contaminants, pharmacokinetics, and the lactating mother. *Environmental Health Perspectives* 102(Suppl. 11):89–95.
118. Rogan WJ, Gladen BC, McKinney JD, Albro PW. 1983. Chromatographic evidence of polychlorinated biphenyl exposure from a spill. *JAMA* 249:1057–1059.
119. Poland RL, Cohen SN. 1980. The contamination of the food chain in Michigan with PPB: The breast-feeding question. In AR Liss, ed., *Drugs and Chemical Risks to the Fetus and Newborn*. New York, NY: Alan R. Liss, Inc.
120. Jensen AA. 1991. Levels and trends of environmental chemicals in human milk. In AA Jensen, SA Slorach, eds., *Chemical Contaminants in Human Milk* (pp. 45–198). Boca Raton, FL: CRC Press.
121. Schecter A, Gasiewicz TA. 1987. Health hazard assessment of chlorinated dioxins and dibenzofurans contained in human milk. *Chemosphere* 16:2147–2154.
122. Jensen AA, Slorach SA. 1991. Assessment of infant intake of chemicals via breast milk. In AA Jensen, SA Slorach, eds., *Chemical Contaminants in Human Milk* (pp. 215–222). Boca Raton, FL: CRC Press.
123. Lindstrom G, Hooper K, Petreas M, Stephens R, Gilman A. 1995. Workshop on perinatal exposure to dioxin-like compounds. I. Summary. *Environmental Health Perspectives* 103(Suppl. 2):135–142.
124. Kimbrough RD. 1991. Toxicological implications of human milk residues as indicated by toxicological and epidemiological studies. In AA Jensen, SA Slorach, eds., *Chemical Contaminants in Human Milk* (pp. 271–284). Boca Raton, FL: CRC Press.
125. Jensen AA. 1991. Occupational chemicals in human milk. In AA Jensen, SA Slorach, eds., *Chemical Contaminants in Human Milk* (pp. 216–217). Boca Raton, FL: CRC Press.
126. Rogan W, Gladen B. 1983. Monitoring breast milk contamination to detect hazards from waste disposal. *Environmental Health Perspectives* 48:87–89.
127. Gladen BC, Rogan WJ. 1995. DDE and shortened duration of lactation in a northern Mexican town. *American Journal of Public Health* 85:504–508.
128. Kimbrough, RD. 1991. Consumption of fish: Benefits and perceived risk. *Journal of Toxicology and Environmental Health* 33:81–91.
129. Wickizer TM, Brilliant LB. 1981. Testing for polychlorinated biphenyls in human milk. *Pediatrics* 68:411–415.
130. Wolff MS. 1983. Occupationally derived chemicals in breast milk. *American Journal of Industrial Medicine* 4:259–281.
131. Stephens RD, Rappe C, Hayward DG, Nygren M, Startin J, Esboll A, Carle J, Yrjanheikki EJ. 1992. World Health Organization International Intercalibration Study on dioxins and furans in human milk and blood. *Analytical Chemistry* 64:3109–3117.
132. Jensen AA. 1991. Transfer of chemical contaminants into human milk. In AA Jensen, SA Slorach, eds., *Chemical Contaminants in Human Milk* (pp. 1–8). Boca Raton, FL: CRC Press.
133. Dabeka RW, Karpinski KF, McKenzie AD, Bajdik CD. 1986. Survey of lead, cadmium and fluoride in human milk and correlation of levels with environmental and food factors. *Food and Chemical Toxicology* 24:913–921.
134. Blood lead levels—United States, 1988–1991. 1994. *Morbidity and Mortality Weekly Report* 43:545–548.
135. Dillon HK, Wilson DJ, Schaffner W. 1974. Lead concentrations in human milk. *American Journal of Diseases of Children* 128:491–492.
136. Ellenhorn MJ. 1997. *Medical Toxicology* (2nd ed., pp. 1565–1566). Baltimore, MD: Williams & Wilkins.
137. Ong CN, Phoon WO, Law HY, Tye CY, Lim HH. 1985. Concentrations of lead in maternal blood, cord blood and breast milk. *Archives of Disease in Childhood* 60:756–759.
138. Amin-Zaki L, Elhassani S, Majeed MA, Clarkson TW, Doherty RA, Greenwood M. 1974. Intra-uterine methylmercury poisoning in Iraq. *Pediatrics* 54:587–595.
139. Amin-Zaki L, Elhassani S, Majeed MA, Clarkson TW, Doherty RA, Greenwood M. 1974. Studies of infants postnatally exposed to methylmercury. *Journal of Pediatrics* 85:81–84.
140. Meyers GJ, Marsh DO, Davidson PW, Cox C, Shamlaye CF, Tanner M, Choi A, Chernichiari E, Choisy O, Clarkson TW. 1995. Main neurodevelopmental study of Seychellois children following in utero exposure to methylmercury from a maternal fish diet: Outcome at six months. *Neurotoxicology* 16:653–664.

141. Giroux D, Lapointe G, Baril M. 1992. Toxicological index and the presence in the workplace of chemical hazards for workers who breast-feed infants. *American Industrial Hygiene Association Journal* 53:471-474.
142. Gori G, Cama G, Guerresi E, Cocchi G, Dalla Casa P, Galtavecchia E, Ghini S, Tonelli D. 1988. Radioactivity in breast milk and placentas during the year after Chernobyl accident [letter]. *American Journal of Obstetrics and Gynecology* 158:1243-1244.

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27. Breastfeeding Resource Handbook Questionnaire

The publication of this resource handbook depends upon input from you, the resource handbook user. Please complete the following questionnaire and mail to:

Linda C. Pugh
Johns Hopkins University, School of Nursing
525 North Wolfe Street
Baltimore, MD 21205
Fax: 410-955-7463
lpugh@son.jhmi.edu

1. Are you listed in the directory? Yes No

If yes, please up-date information as necessary:

2. Do you find the directory helpful? Yes No

Please explain:

3. On average, what is the estimated number of times per week that you refer to the resource handbook?

4. What changes would you make to the directory?

5. Please list any appropriate agencies not currently listed in the directory.

Thank you for your cooperation.
Without your help this resource handbook would not be as up- to-date as possible.

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