



FIRST DO NO HARM: REASONS WHY EVERY PHYSICIAN SHOULD CARE ABOUT BREASTFEEDING

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Objectives

- Relate breastfeeding benefits to diabetes, breast cancer, and heart disease
- Utilize updated CDC guidelines for care of breastfeeding patients with COVID-19 or Influenza
- Demystify the common issues a physician may encounter including medication choices, imaging choices, and anesthesia concerns in the breastfeeding patient
- Demonstrate empathic care strategies for the breastfeeding patient with cancer
- Provide practical resources for physicians

Disclosures

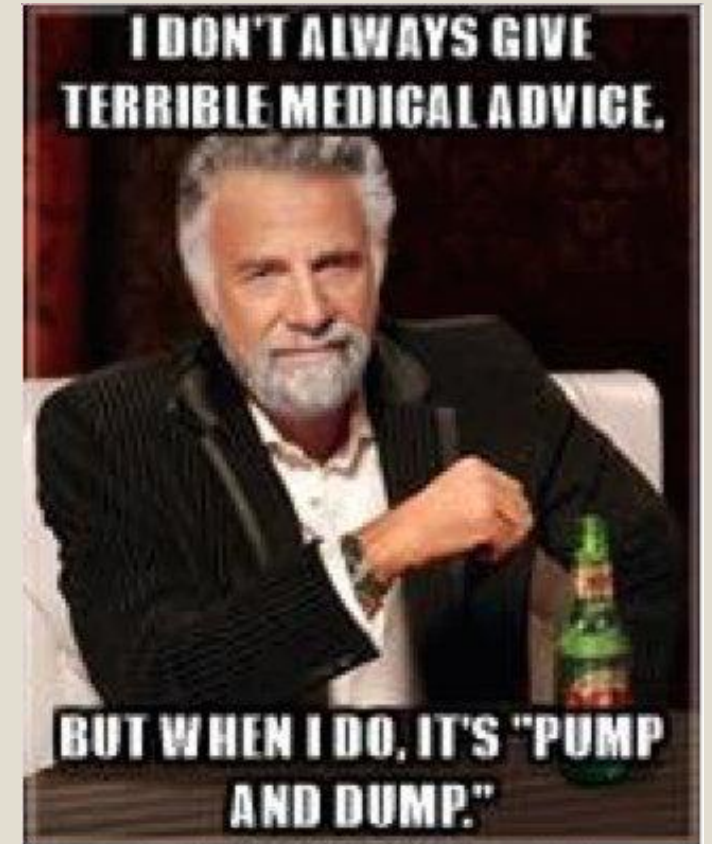
- None

Volunteers Please

- Please take the time to download either **Lactmed** application or the **InfantRisk Center** application
- Lactmed is free
- InfantRisk is 10\$ and worth every penny I promise if you ever have or ever will take care of or speak to someone who is breastfeeding or pregnant

Why It Matters to You

- The **American Academy of Pediatrics (AAP)**, the **World Health Organization (WHO)**, the **American College of Obstetricians and Gynecologists (ACOG)**, the **American Academy of Family Physicians (AAFP)**, and the **US Department of Health and Human Services** support protecting the breastfeeding relationship as best practice.
- Maternal illness, hospitalization, and the need to take medications are cited as some of the common reasons women stop breastfeeding





Why It Matters to Me

- Active Member of Dr. Milk (Physician Mothers Interested in Lactation Knowledge) since its inception in 2010 now up to 24,527 members on Facebook
- These three beauties
- My patients and my personal experience with their care

Why It Matters
to Your Patients,
Friends, and
Family



The Internist's Bread and Butter

- In 2016 a study by Bartick, et al demonstrated that suboptimal breastfeeding (less than 90%) results in an increased risk of type 2 diabetes, hypertension, breast cancer, and myocardial infarction
- **As more women opt to breastfeed for extended periods, the likelihood that they may need to seek medical care, while still breastfeeding also increases.**

The Pediatrician's Bread And Butter

- Infants and children who are not breastfed are at an increased risk for infectious diseases such as gastroenteritis, otitis media
- Increased risk for asthma and sudden infant death syndrome
- More likely to be hospitalized for bronchitis, pneumonia, or other respiratory diseases.
- The risk for childhood obesity is reduced in individuals exclusively breastfed for six to nine months.
- Appears to be a reduced incidence of childhood leukemia in children who have been breastfed for six months or more

- Breastfeeding promotion, protection and support. New York State Department of Health. <https://www.health.ny.gov/community/pregnancy/breastfeeding/>. Accessed December 1, 2017
- Amitay EL, Keinan-Boker L. Breastfeeding and childhood leukemia incidence: a meta-analysis and systematic review. *JAMA Pediatr.* 2015;**169**(6):e151025. <https://doi.org/10.1001/jamapediatrics.2015.1>
- Harder T, Bergmann R, Kallischnigg G, Plagemann A. Duration of breastfeeding and risk of overweight: a meta-analysis. *Am J Epidemiol.* 2005;**162**(5):397-403.

Diabetes

- Improved glucose tolerance and insulin sensitivity while lactating

Table 5. Hazard Ratios for Type 2 Diabetes, Parous Women Only, in Analyses Restricted to Women Reporting a Birth in the Past 15 Years

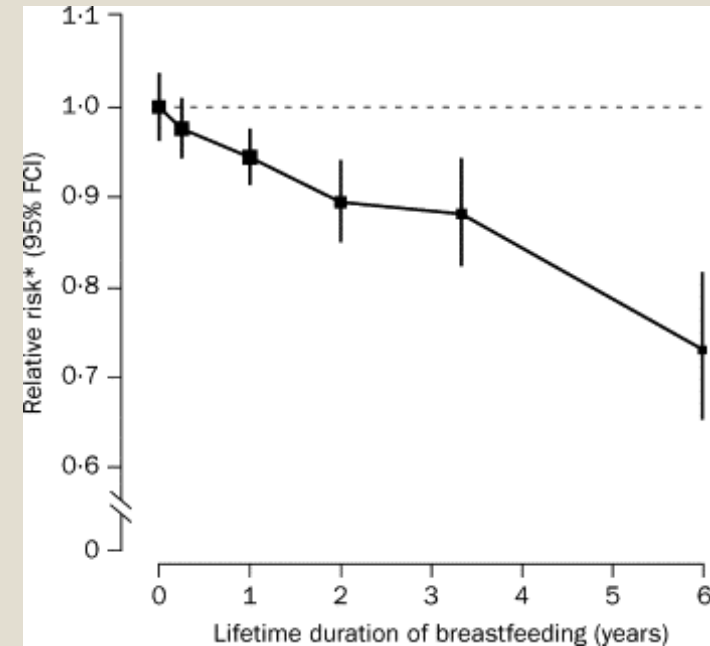
	Cumulative Duration of Lactation, mo						P Value for Trend*	HR per Additional Year of Lactation
	None	>0 to 3	>3 to 6	>6 to 11	>11 to 23	>23		
Nurses' Health Study†								
No. of cases	68	30	18	18	28	24		
Person-years of follow-up	23 419	12 400	8669	9415	15 251	15 023		
Age-adjusted HR (95% CI)	1.00	0.76 (0.48-1.18)	0.76 (0.45-1.31)	0.61 (0.35-1.05)	0.63 (0.40-0.99)	0.41 (0.25-0.67)	<.001	0.80 (0.70-0.93)
Covariate-adjusted HR (95% CI)§	1.00	0.68 (0.42-1.09)	0.67 (0.39-1.18)	0.61 (0.34-1.08)	0.67 (0.42-1.08)	0.44 (0.26-0.74)	.008	0.84 (0.73-0.96)
Covariate-adjusted HR (95% CI), including current BMI§	1.00	0.72 (0.44-1.18)	0.74 (0.42-1.32)	0.64 (0.35-1.17)	0.70 (0.42-1.15)	0.47 (0.27-0.81)	.02	0.85 (0.73-0.99)
Nurses' Health Study II‡								
No. of cases	117	116	69	112	147	110		
Person-years of follow-up	72 041	70 354	62 388	116 228	155 323	143 430		
Age-adjusted HR (95% CI)	1.00	1.07 (0.83-1.39)	0.73 (0.54-0.99)	0.62 (0.48-0.81)	0.57 (0.44-0.72)	0.40 (0.31-0.53)	<.001	0.76 (0.70-0.82)
Covariate-adjusted HR (95% CI)§	1.00	1.03 (0.80-1.35)	0.78 (0.57-1.06)	0.76 (0.58-0.99)	0.76 (0.59-0.98)	0.53 (0.40-0.70)	<.001	0.82 (0.76-0.89)
Covariate-adjusted HR (95% CI), including current BMI§	1.00	0.98 (0.75-1.28)	0.76 (0.55-1.03)	0.74 (0.56-0.98)	0.81 (0.62-1.04)	0.59 (0.44-0.79)	<.001	0.86 (0.79-0.93)

Abbreviations: BMI, body mass index; CI, confidence interval; HR, hazard ratio.
 *P value for trend across categories, based on category midpoint.
 †Nurses' Health Study: prospective analysis using cases from 1986 to 2002.
 ‡Nurses' Health Study II: retrospective analysis using lactation data from 1997 and 2003, cases from 1989 to 2001, parous women only.
 §Adjusted for parity, BMI at age 18 years, dietary score quintile, physical activity, family history of diabetes, smoking status, birth weight of participant, and multivitamin use.

- Stuebe AM, Rich-Edwards JW, Willett WC, Manson JE, Michels KB. Duration of Lactation and Incidence of Type 2 Diabetes. *JAMA*. 2005;294(20):2601-2610. doi:10.1001/jama.294.20.2601

Breast Cancer

- Relative risk of breast cancer is decreased by 4.3% for every year of breastfeeding
- This protective effect seems greater for women who had extended periods of breastfeeding during their lifetime, particularly in case of BRCA1 mutation



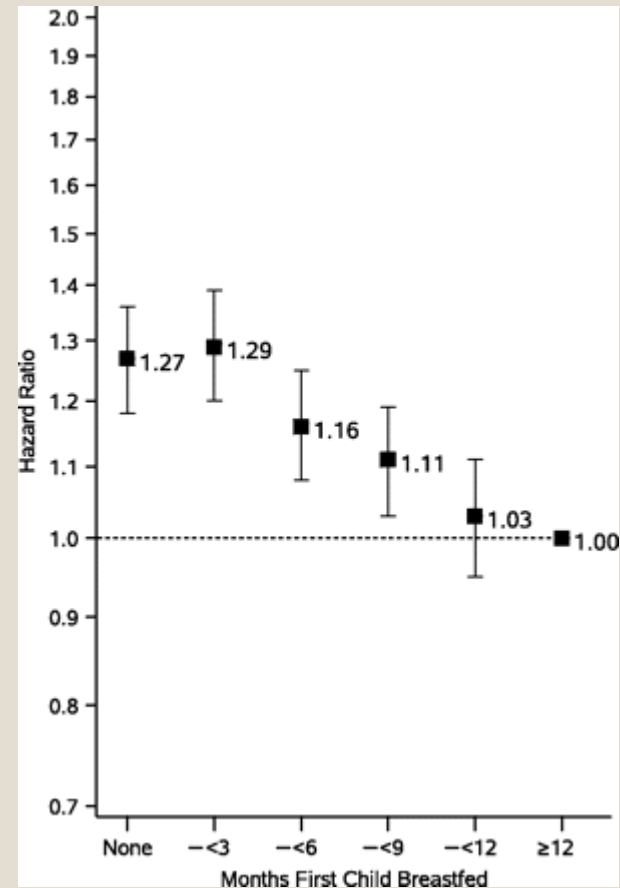
- Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries, including 50 302 women with breast cancer and 96 973 women without the disease *The Lancet* ,Volume 360 ,Issue 9328 ,187 – 195
- Helewa M, Lévesque P, Provencher D, Lea RH, Rosolowich V, Shapiro HM; Breast Disease Committee and Executive Committee and Council, Society of Obstetricians and Gynaecologists of Canada. Breast cancer, pregnancy, and breastfeeding. *J Obstet Gynaecol Can.* 2002 Feb;24(2):164-80; quiz 181-4. English, French. PubMed PMID: 12196882.

Heart Disease

- Decreased risk of hypertension with breastfeeding 6+ months

Association between duration of total breastfeeding for the first child and incident hypertension among 55,636 parous women in the Nurses' Health Study II, United States, 1991–2005

Alison M. Stuebe, Eleanor B. Schwarz, Karen Grewen, Janet W. Rich-Edwards, Karin B. Michels, E. Michael Foster, Gary Curhan, and John Forman. Duration of Lactation and Incidence of Maternal Hypertension: A Longitudinal Cohort Study *Am. J. Epidemiol.* (2011) 174 (10): 1147-1158 first published online October 12, 2011 doi:10.1093/aje/kwr227



Heart Disease cont.

- Reduced risk of myocardial infarction – increased reduction with longer breastfeeding
 - Incident myocardial infarction and duration of lactation among parous women in the Nurses' Health Study: Prospective analysis using cases from 1986 to 2002; all models adjusted for age, parity, and history of stillbirth.

Cumulative duration of lactation (mo)	None	> 0-3	> 3-6	> 6-11	> 11-23	> 23	P for trend
Cases, n	1037	627	304	224	241	107	
Person-years	494,667	306,669	161,586	132,492	164,746	90,805	
Age, parity, and stillbirth-adjusted HR (95% CI)	1.0 (ref)	0.90 (0.81-0.99)	0.91 (0.8-1.03)	0.88 (0.76-1.02)	0.77 (0.67-0.89)	0.63 (0.51-0.77)	< .0001
Multivariate-adjusted HR (95% CI) ^a	1.0 (ref)	1.01 (0.91-1.11)	1 (0.88-1.14)	1.02 (0.88-1.18)	0.93 (0.8-1.07)	0.77 (0.62-0.94)	.02




◦ Stuebe, Alison M. et al. Duration of lactation and incidence of myocardial infarction in middle to late adulthood American Journal of Obstetrics & Gynecology , Volume 200 , Issue 2 , 138.e1 - 138.e8



Common things you may
encounter



CDC Guidance: COVID-19

- Interim guidance (Feb 19, 2020)
- Not much known about COVID-19
- In limited studies on women with COVID-19 and another coronavirus infection, Severe Acute Respiratory Syndrome (SARS-CoV), the virus has not been detected in breast milk
 - however we do not know whether mothers with COVID-19 can transmit the virus via breast milk.
- If symptomatic and/or PUI, wash/dry hands before touching baby and wear face mask when holding/nursing baby
- If symptomatic and pumping, wash/dry hands before touching pump parts and wash all pump parts after using; consider having someone who is well feed EBM to baby

<https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/pregnancy-guidance-breastfeeding.html>

5:08   





AA  cdc.gov 






 Centers for Disease Control and Prevention 

Coronavirus Disease 2019 (COVID-19)

Breastfeeding

This interim guidance is intended for women who are confirmed to have COVID-19 or are [persons-under-investigation \(PUI\)](#) for COVID-19 and are currently breastfeeding. This interim guidance is based on what is currently known about COVID-19 and the transmission of other viral respiratory infections. CDC will update this interim guidance as needed as additional information becomes available. For breastfeeding guidance in the immediate postpartum setting, refer to [Interim Considerations for Infection](#)

 |  |  | 



Water, Sanitation & Environmentally-related Hygiene

Healthy Water Home > Water, Sanitation, & Environmentally-related Hygiene > Healthy Childcare > Infant Feeding



Water, Sanitation, & Environmentally-related Hygiene

Handwashing & Nail Hygiene +

Healthy Childcare -

Diapering +

Infant Feeding -

How to Keep Your Breast Pump Kit Clean: Science

How to Keep Your Breast Pump Kit Clean: The Essentials

[Español \(Spanish\)](#)

Print-and-Go Fact Sheet



Printable Fact Sheet: How to Keep Your Breast Pump Kit Clean

[Print version: How to Keep Your Breast Pump Kit Clean](#) [PDF - 1 page] (English)

[Print version: How to Keep Your Breast Pump Kit Clean](#) [PDF - 1 page] (Español)

Treatment of COVID-19

Some one shout out a medication being used to treat COVID-19 and then look it up under Lactmed or InfantRisk

-
- Is it safe for a 5month old breastfeeding infant?
- Is it safe for a 2nd trimester pregnant woman?

◦ Similar to how you would not treat the liver and the lungs the same **the placenta is not the same as a breast.**

CDC Guidance: Influenza

- “A mother with suspected or confirmed flu should take all possible precautions to avoid spreading the virus to her infant while continuing to provide breast milk to her infant.”
- Continue breastfeeding
- Protective antibodies
- Wash/dry hands, cough/sneeze into tissue and throw away, face mask while feeding
- Immunize all family members
- Manage milk supply
- Anticipatory guidance re: drop in supply

CDC Guidance: Influenza

- Tamiflu FDA approved tx of acute uncomplicated influenza in persons 14 days and older, and for chemoprophylaxis in persons 1 year and older
- Treatment of flu in infants less than 14 days old, and prophylaxis in infants 3 m - 1 y is recommended by CDC and AAP
- If < 3 months old, use of oseltamivir for chemoprophylaxis is not recommended unless the situation is judged critical due to limited data in this age group

5:06

< Search Results Details

OSELTAMIVIR PHOSPHATE

1ST 2ND 3RD TRIMESTER BIRTH 0-6 6-12 12+ MONTHS

TRADE NAMES: Tamiflu
DRUG TYPE: Anti-viral for influenza A and B
USUAL DOSE: 75 mg twice daily for 5 days.
LACTATION RISK: L2 - Limited Data-Probably Compatible
PREGNANCY RISK: Unknown, risk to the fetus cannot be ruled out
RELATIVE INFANT DOSE: 0.47%
SIDE EFFECTS: Nausea, vomiting, abdominal pain, diarrhea.
ALTERNATIVE MEDS:
T1/2: 6-10 h
ORAL BIOAVAILABILITY: 75%
MW: 312

Home Search Call Settings

Mastitis

- Inflammation of the breast tissue
- Usually related to nipple trauma from a poor latch, stasis of milk from a clogged duct or incomplete emptying
- Symptoms can include localized erythema, pain, swelling, and systemic flu like symptoms
- Treatment
 - **Relieve the blockage**
 - Self care
 - NSAIDs
 - Heat, ice, massage
 - Frequent feeding or expression of milk
 - Antibiotics when indicated

Mastitis continued

- Antibiotic choices
 - Commonly penicillin resistant *S. aureus*, *Streptococcus*, or *E. coli*
 - Treat 10-14 days
 - **Dicloxacillin 500mg q6h is gold standard**
 - May be hard to obtain at some pharmacies
 - Cephalexin 500mg q6h
 - Clindamycin for severe penicillin allergies
 - Bactrim for suspected MRSA
 - Caution in babies under 21 days as risk of hyperbilirubinemia with maternal Bactrim use

Mastitis continued

- If not responding, consider change of antibiotics or ultrasound to evaluate for abscess
- Make sure mom is following the supportive care guidelines in addition to antibiotic
- Milk is safe for a well baby to drink and direct feeding should be encouraged

- http://www.bfmed.org/Media/Files/Protocols/2014_Updated_Mastitis6.30.14.pdf

Antidepressants & Post partum Depression

- Edinburgh postpartum depression scale
- SSRIs are safe in breastfeeding
- Mother needs support as well!
 - www.poemonline.org is an amazing peer to peer resource
 - Mentors
 - List of counselors in the area
- DO NOT BE AFRAID TO TREAT!

Breast Cancer

- Women undergoing chemotherapy or tamoxifen treatment should not breastfeed
- Breastfeeding can continue during radiation treatment from the non-irradiated breast
- Women treated for breast cancer who wish to become pregnant can do so
 - Does not seem to be associated with a worse prognosis for their breast cancer
- Women previously treated for breast cancer can breast feed



Freund C, Mirabel L, Annane K, Mathelin C. [Breastfeeding and breast cancer]. *Gynecol Obstet Fertil*. 2005 Oct;33(10):739-44. Review. French. PubMed PMID: 16139543.

Helewa M, Lévesque P, Provencher D, Lea RH, Rosolowich V, Shapiro HM; Breast Disease Committee and Executive Committee and Council, Society of Obstetricians and Gynaecologists of Canada. Breast cancer, pregnancy, and breastfeeding. *J Obstet Gynaecol Can*. 2002 Feb;24(2):164-80; quiz 181-4. English, French. PubMed PMID: 12196882.

Cancer

- Women undergoing chemotherapy treatment should not breastfeed
 - Young women often need chemotherapy to improve outcomes, but a lot will depend on type/stage of cancer
- Breast feeding can continue during radiation as long as the chest is not being irradiated
- Consider discussion regarding purchasing/obtaining banked pasteurized donor human milk
 - <http://phoenixmilkspot.com>
 - Eats on Feets on Facebook
 - Human Milk 4 Human Babies on Facebook

***Ultimately you want to have a mom cured
and be around for her baby***

First do no harm...

Get that woman a pump!

- Interview the patient and assess her needs re: breastfeeding her baby or milk supply protection if breastfeeding is contraindicated.
- Request that the baby can “room in”
 - A family member will be required to be present at all times to care for the baby
 - The patient and staff cannot be responsible for caring for the baby
- Most women cannot go more than 3-4 hours without pumping
 - Decreased supply
 - Blocked ducts and mastitis





TITLE: Infant as a Visitor			
Number: 14205		Version: 14205.1	
Type: Patient Care		Author: WIS Policy and Procedure Team	
Effective Date: 10/1/2013	Original Date: 10/1/2013	Approval Date: 9/12/2013	Deactivation Date:
Facility: System			
Population (Define): Newborn			
Replaces:			
Approved by: BH System Practice Oversight Team			

Infant as a Visitor

Purpose	<p>The purpose of the policy is to support family bonding and maintenance of breastfeeding during maternal hospitalization.</p> <ul style="list-style-type: none"> There are many factors which may necessitate an inpatient hospitalization for a mother currently breast feeding an infant potentially resulting in separation from the infant. Examples: Maternal complications and baby is discharged before mother, new admission for mom only, maternal complications of a home delivery.
Definitions	<p>Bonding: The attachment that forms between an infant and its mother. Maternal-Infant bonding influences the child's psychological and physical development.</p>
Policy	<ol style="list-style-type: none"> Inform the parents that during the maternal hospital stay, nursing care will not be provided to the infant. Banner Health does not provide infant supplies while the infant is a visitor (e.g. diapers, formula, clothing, blankets, etc.). The patient's family or other designated person will be responsible for all of the baby's care AT ALL TIMES.

Continued on next page



WIS: Infant as a Visitor, Continued

Policy, (continued)	<ol style="list-style-type: none"> Rooming in may be permitted depending on the mother's condition, physician orders, room availability, and ability of family member to stay AT ALL TIMES. If breastfeeding support is needed, contact the breastfeeding specialist in the facility. The ability for the mother to be able to breast feed will be medically evaluated on an ongoing basis and based on the clinical presentation of the mother; therefore, not a guarantee.
Procedure	<ol style="list-style-type: none"> Interview and assess the mother's ability to breastfeed and needs. Inform the mother that someone from her family or other designated person will need to be responsible to provide infant care. Before allowing the mother to breastfeed, provide education about current medication compatibility with breastfeeding. If unable to breastfeed, encourage pumping or expressing the breasts to maintain milk supply. Discuss with the mother the need to maintain sufficient hydration, and nutrition in order to breastfeed. Offer a dietary consultation if necessary.
Additional information	<ol style="list-style-type: none"> <u>Medications and Mothers' Milk</u> by Ph. D. Thomas W. Hale provides an excellent resource. Breastfeeding mothers required reassurance that although the stress of illness or surgery may temporarily interrupt nursing, an adequate milk supply can be maintained. For the mother undergoing surgery or procedures, encourage breastfeeding or pumping the breast just prior to going for the procedure. Encourage the breast pump as soon as possible upon return to room. Mothers may breastfeed after general anesthesia when awake and alert if no other contraindications exist.
Keywords	<p>WIS Breastfeeding Infant Visitors</p>

Policy highlights

- If patient can and desires to breastfeed her baby, provide any needed supplies. Rooming-in may be permitted.
- If the patient cannot/should not breastfeed, the nurse will provide and assemble breast pump equipment.
- If the milk requires discarding (rare circumstance), support the patient in maintaining milk supply for return to breastfeeding goals.
- Breastfeeding mothers require reassurance
 - Sufficient hydration and nutrition are important for recovery
 - Consider NPO status carefully
- The lactating patient scheduled for surgery should pump or breastfed her baby just prior to the procedure.

Cerner orders

Orders

Full screen Print 0 minutes ago

Reconciliation Status
✓ Meds History ✓ Admission ✓ Discharge

Orders Medication List Document In Plan

Orders for Signature

Order Name	Status	Start	Details
01 01C; 0123; 01 FIN:51203941 Admit: 04/02/2018 13:06 MST			
Nursing Orders			
Infant May Room with ... Order		04/05/2018 12:11 ...	04/05/2018 12:11 MST

Details for Infant May Room with Mother

Details Order Comments Diagnoses

*Start Date/Time: 04/05/2018 1211 MST
Referred By:
Details:
Special Instructions:

View

- Orders for Signature
 - Plans
 - Document In Plan
 - Interdisciplinary Care Plans
 - Suggested Plans (5)
 - Orders
 - ADT/Activity/CODE
 - Nursing Orders
 - Nutrition Services
 - Medications
 - Continuous Infusion
 - Laboratory
 - Medical Imaging
 - Multi Departments
 - Therapies
 - Consults
 - Materials Management
 - Common Orders
 - Non Categorized
 - Other

Cerner orders: Breast Pump Electric

+ Add | Document Medication by Hx | Reconciliation | Check Interactions | External Rx History | No Check

Reconciliation Status
✓ Meds History | Admission | ✓ Discharge

Orders | Medication List | Document In Plan

View

- Plans
 - Document In Plan
 - Interdisciplinary Care Plans
 - Medical
 - Breast Care [sub-p] (Init)
 - Breast Care [sub-p] (Init)
 - Breast Care [sub-p] (Init)
 - Suggested Plans (0)
- Orders
 - ADT/Activity/CODE

Diagnoses & Problems
Related Results
Formulary Details

Displayed: All Active Orders | Inactive Orders Since 06/18/2018 | all

Show More Orders...

			Order Name	Status	Details
Materials Management					
<input type="checkbox"/>			S-EQ Breast Pump Electric	Order	03/10/2020 14:...
Common Orders					
<input type="checkbox"/>			Discern Order (Blood Culture [sub-p])	Completed	

Details for S-EQ Breast Pump Electric

Details | Order Comments | Diagnoses



Dx Table

Orders For Cosignature

Orders For Signature

Breast Care (sub-p) or Breastfeeding (sub-p)

The screenshot displays a medical software interface with a search function. The search term 'breast' is entered in the search bar, and a dropdown menu shows the following results:

- BREAST AUGMENTATION
- BREAST BIOPSY
- BREAST BIOPSY BILATERAL
- BREAST BRACHYTHERAPY WITH BALLOON IMPLANT
- BREAST BRACHYTHERAPY WITH SEED IMPLANT
- Breast Cancer Antigen 27.29
- BREAST CAPSULECTOMY
- BREAST CAPSULOTOMY
- Breast Care
- Breast Care [sub-p]**
- BREAST MASS EXCISION
- BREAST PROSTHESIS EXCHANGE
- BREAST PROSTHESIS IMPLANT
- BREAST PROSTHESIS REMOVAL
- Breast Pump

The interface also shows a 'Diagnoses & Problems' section with a table of current diagnoses. The table has columns for 'Annotated Display' and 'Code'. One entry is visible:

Annotated Display	Code
Acute pharyngitis	J02.9

Breast Care (sub-p) or Breastfeeding (sub-p)

Reconciliation Status: Meds History Admission Discharge

Orders Medication List Document In Plan

View Orders for Signature

Plans Document In Plan Interdisciplinary Care Plans Medical Breast Care [sub-p] (Init) Breast Care [sub-p] (Init) Breast Care [sub-p] (Init) Breast Care [sub-p] (Init) Suggested Plans (0)

Diagnoses & Problems Related Results Formulary Details

Reconciliation Status: Meds History Admission Discharge

Orders Medication List Document In Plan

View Orders for Signature

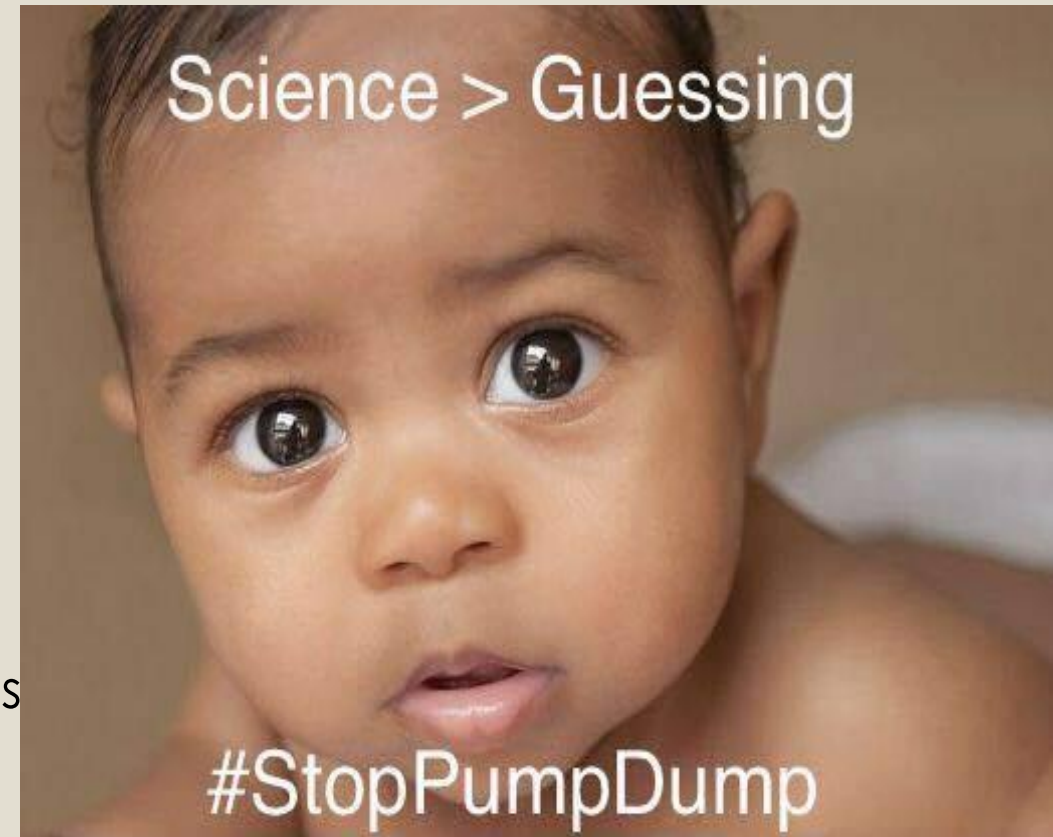
Component	Status	Details	Order Com.
<input type="checkbox"/> lanolin topical		1 app, Topical, Cream, On Call, ...	For nipple d
<input type="checkbox"/> emollients, topical (Aquaphor)		1 app, Topical, Ointment, On C...	For nipple d
△ Consults			
<input checked="" type="checkbox"/> Consult Lactation		T;N, Physician	
△ Other			
Feedback and effective date			
<input type="checkbox"/> Send suggestions to OB Clinical Consensus Group			
<input checked="" type="checkbox"/> Effective Date		1/29/2020, Breast Care [sub-p] /...	

Details

Dx Table Orders For Cosignature Save as My Favorite Orders For Signature

Physician Cause of Unintended Early Cessation of Breastfeeding

- We receive minimal education on human lactation, and we don't ask our patients if they are breastfeeding
- Seems better to be “safe than sorry” when questions arise about medications, procedures, radiology
- Expressing milk or using formula is not without risk
 - Bottle refusal/Breast refusal/Mastitis/Clogged Ducts
 - Increased stress with a mother already at risk
 - Formula is a human milk substitute
- Conflicting info leads to harm and mistrust



If you don't know – don't guess!

Hidden Barriers

“Fresh green leaves are used to pat the heads of well-behaved people — those doing an important activity. The image of the setting sun and the departing light as if to say “Do it before it gets too late.” The traditional importance attached to twins as a repetition of an important statement from God by making the women breastfeeding twins in this picture.”



“The Twin Stars of Life”
by Ibiyinka Alao

Medications

- MOST medications are fine with breastfeeding
- Pharmacology
 - Take into consideration
 - the size of the molecule and protein binding capability of drug
more protein bound = less excretion into breast milk
 - half life of medication or “active metabolites”
 - how it transports into milk
 - how much is orally ingested
 - baby’s metabolism
 - <http://www.infantrisk.com/content/drug-entry-human-milk>
- If medication is not compatible
 - Can she pump and dump temporarily?
 - Is there another option that would be just as good?

Can your patient
breastfeed if...

She has had general
anesthesia?

Able to Hold, Able to Feed



#StopPumpDump

Anesthesia & Breastfeeding: More Often Than Not, They Are Compatible

In this issue, Lee *et al.*² randomized laboring patients to different concentrations of epidural fentanyl. There was no difference in successful breastfeeding outcomes at 6 weeks.

Breastfeeding is important to infant health. Receiving anesthesia should not affect mom's ability to breastfeed, or the safety of her breastmilk.¹⁻⁴



“A general principal is that a mother can resume breastfeeding once she is awake, stable, and alert after anesthesia has been given.”²

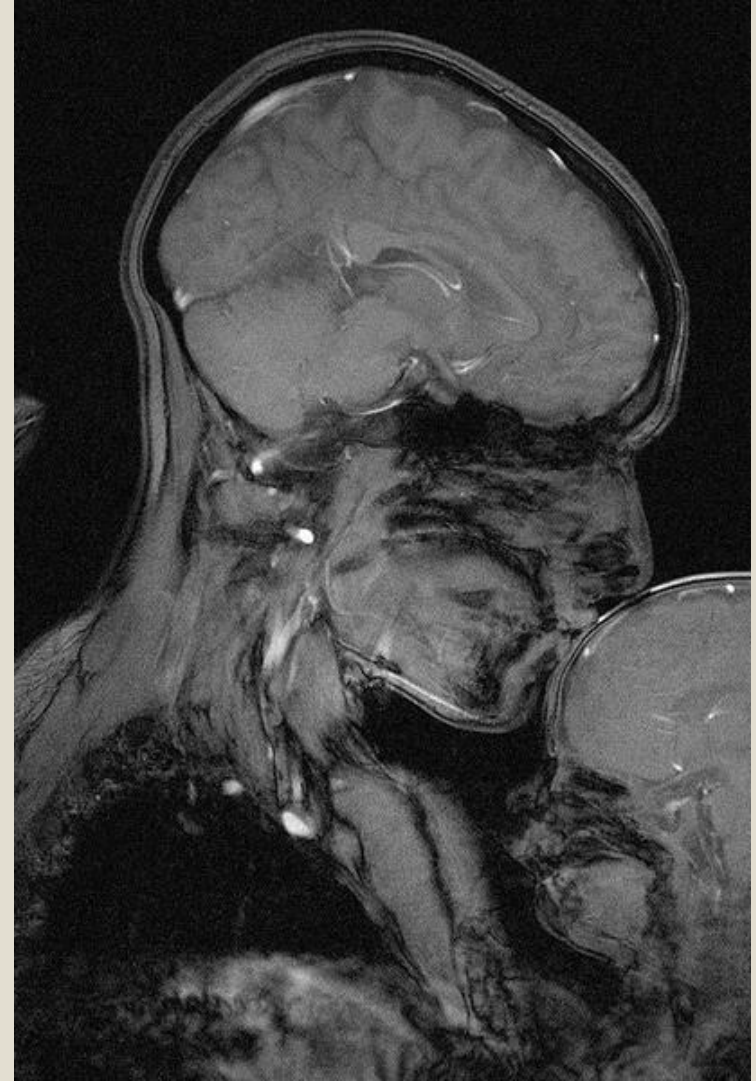
YES

As soon as she is awake and able to hold her baby

- General anesthesia should not affect breastfeeding.
- The point at which you wake up after general anesthesia is the point where enough of the drug has left your system that it no longer has an effect.
- Pumping can resume in recovery.
- Encourage the patient to breastfeed or pump just before the procedure in case she's out for a while or too groggy to function normally.

Can your patient
breastfeed if...

She needs an X-ray
or a CT scan
or a MRI



<http://www.smithsonianmag.com/science-nature/why--captured-MRI-mother-child-180957207/#EMiefH42XqYV36xK.01>

Radiology studies

- **Green light**

- Plain x-ray
- CT scan with or without contrast
- MRI with or without contrast
- Ultrasound or Angiogram or Intravenous pyelogram

- **Yellow light**

- Nuclear Medicine – depends on isotope
 - VQ scan: pump for 24 hours, can store milk and the radioactivity will decay
 - Wait 4-5 half-lives before starting breastfeeding. After 5 half-lives, approximately 98% of a drug or radioisotope is eliminated.

- **Red light**

- Radioactive Iodine Treatment (thyroid scan using I131)

What to know before you go bananas about radiation

<https://www.universityofcalifornia.edu/longform/what-know-you-go-bananas-about-radiation>

When it comes to nuclear radiation, the general feeling is that any amount is too much – but, in truth, we're all exposed to radiation every day.

a human body in sieverts; eating one average-sized banana is equivalent to 0.1 microsieverts.



Take a banana: a tasty source of potassium, but also a natural source of radiation from potassium-40 isotopes. How much? Scientists measure the amount of damage radiation would do to

The sources of radiation that people worry about, are they a real source of concern, or are they just a bunch of bananas?

Living within 50 miles of a nuclear power plant for a year

Living near a nuclear power plant for a whole year exposes you to less radiation than eating one banana – and less than living near a coal power plant.



0.9 BANANAS
0.09 µSv

Airport security scan



2.5 BANANAS
0.25 µSv

Dental X-ray



50 BANANAS
5 µSv

1 day on Earth

The average person gets a dose of around 10 µSv per day, but this varies widely.



100 BANANAS
10 µSv

Flight from NY to LA

Long flights expose you to more radiation than airport security.



400 BANANAS
40 µSv

Living in a concrete stone, or brick building for a year



700 BANANAS
70 µSv

Average dose within 10 miles of the Three Mile Island accident



800 BANANAS
80 µSv

Spending an hour 2 miles from Fukushima, 2 months after accident



1,000 BANANAS
100 µSv

6 months of eating food

Your choice: 22 bananas every day or a normal diet.



4,000 BANANAS
400 µSv

Mammogram



4,000 BANANAS
400 µSv

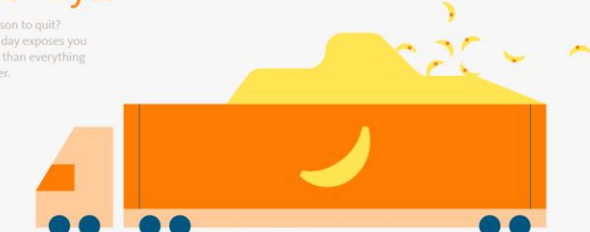
CT Scan



100,000 BANANAS
10,000 µSv

Smoking a pack of cigarettes a day for 1 year

Need another reason to quit? Smoking a pack a day exposes you to more radiation than everything above put together.



240,000 BANANAS
24,000 µSv

Dose at which an increased risk of death from cancer is evident

Now it's starting to get a little bananas. There's no precise line at which radiation becomes dangerous, but cancer risk starts to increase to measurable levels around here.



1 MILLION BANANAS
100,000 µSv

Average dose of Chernobyl residents evacuated after 1986 accident



3.5 MILLION BANANAS
350,000 µSv

Temporary radiation sickness, not fatal



10 MILLION BANANAS
1 MILLION µSv

Can your patient breastfeed if...

If she is in pain and needs medication to treat it?



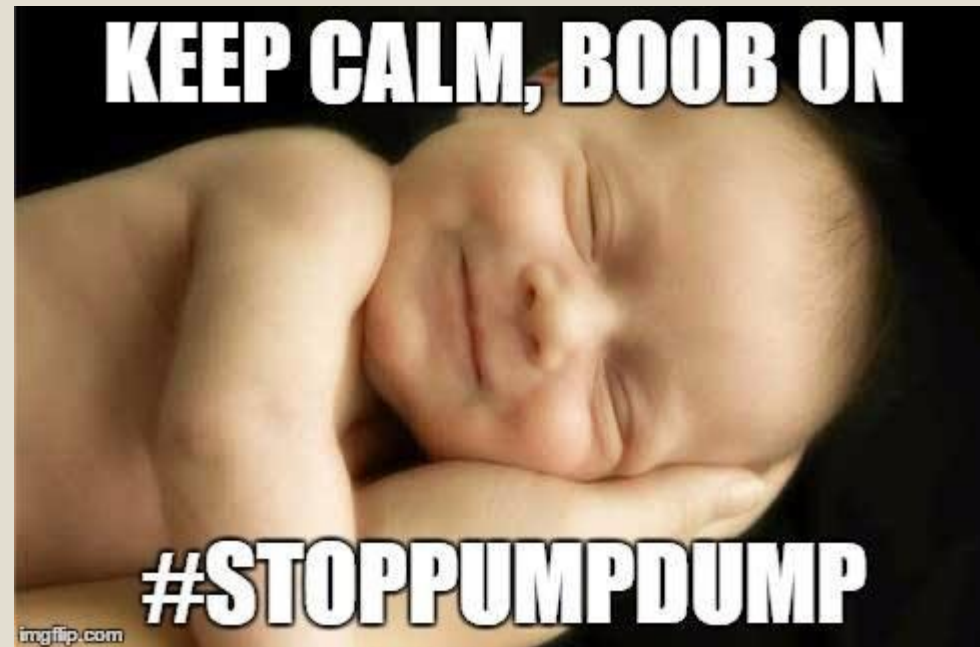
YES

- **Severe pain:** Morphine, codeine, hydrocodone, fentanyl, and hydromorphone have been determined, by several studies, to be moderately safe for breastfeeding women. **Morphine is the preferred opiate to use by a breastfeeding mother due to its poor oral bioavailability.**
 - These medications have been studied extensively in lactating women and have demonstrated only occasional neonatal sedation. Watch infants under one month of age more carefully.
- **Hydrocodone should be used instead of codeine** in the rare instance that the mother is an ultra-rapid metabolizer of codeine into morphine

YES (pain meds continued)

- For **mild to moderate pain** or rheumatic pain: **NSAIDs are ideal**. Studies have shown ibuprofen to be not only compatible with breastfeeding, but also extremely safe due to poor transfer into milk
 - Naproxen, should be used for short durations due to the potential build-up of drug in the breast milk.
- Drugs that contain salicylic acid, such as **aspirin**, should be used with caution. However the use of **81 mg per day is unlikely to increase the risk of Reye syndrome**.
- Acetaminophen and ibuprofen are both anti-pyretics that are compatible with breastfeeding and can be used to treat fevers as well.

The answer is almost NEVER
Pump and Dump



Can your patient breastfeed if...

She is Septic?

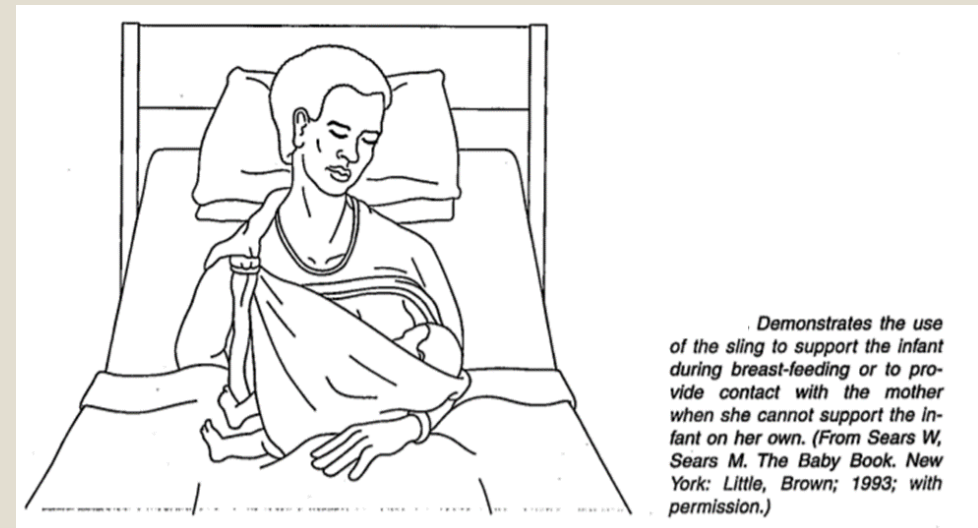
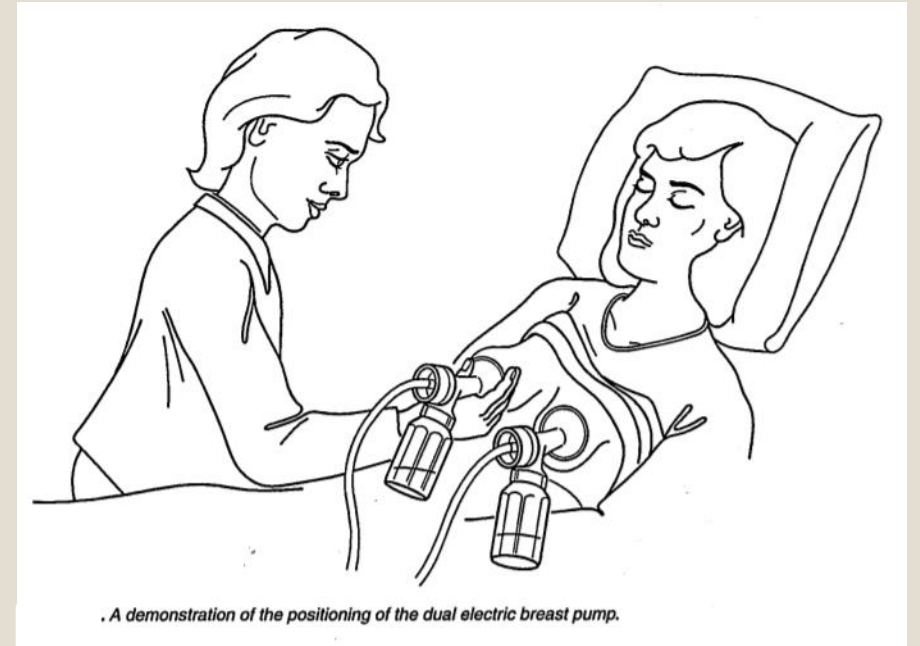


Yes...but wait

- Maternal infections of the GU or GI tract do not pose a risk to infants
- 24 hours suspension of breastfeeding after initial treatment if concern for:
 - **N gonorrhoeae, H influenzae, Group A/B streptococci, staphylococci** bacteremia as these bacteria may reach the milk.
- Prophylactic or empiric therapy for the infant, against the same organism, may be indicated.
- Lawrence RM & Lawrence RA. *Breastfeeding and Infection* [Clin Perinatol](#). 2004 Sep;31(3):501-28.

Critical Care

- Physiologic stabilization and maintenance of life of a critically ill, newly delivered woman is the immediate priority for the critical care team.
- Once stabilized each mother must be evaluated for lactation status
- Must also consider need for Maternal – Infant Bonding



Can your patient
breastfeed if...



She smokes
cigarettes or
marijuana?

Or if she is on
Buprenorphine
or
Methadone?

Tobacco: it's better to quit, but if you can't, at least keep breastfeeding

- Smoking has been linked to:
 - Earlier weaning. One study showed that the heaviest smokers tend to wean the earliest.
 - Lower milk production
 - Lower levels of prolactin. The hormone prolactin must be present for milk synthesis to occur.
 - Poor infant weight gain
- Maternal smoking is associated with an increased incidence in infant respiratory allergy and SIDS.

No Marijuana

- Street drugs such as PCP (phencyclidine), cocaine, and **cannabis** can be detected in human milk, and their use by breastfeeding mothers is of concern, particularly about the infant's long-term neurobehavioral development and **thus are contraindicated (AAP and CDC)**
- Tetrahydrocannabinol (THC), the main active component of marijuana, is stored in body fat and slowly released over time, meaning an infant could be exposed to an unknown amount and for an extended period of time.
- Cannabidiol (CBD) products, may contain other contaminants (e.g., pesticides, heavy metals, bacteria, and fungus) that could be dangerous to a mother and her infant.
- Increased risk of SIDS when mothers regularly use marijuana

<https://www.cdc.gov/breastfeeding/breastfeeding-special-circumstances/vaccinations-medications-drugs/marijuana.html>

Yes Methadone & Buprenorphine

- The concentrations of **methadone** found in human milk are low
 - Women on stable doses of methadone maintenance should be encouraged to breastfeed if desired, irrespective of maternal methadone dose
- The amounts of **buprenorphine** in human milk are small and are unlikely to have short-term negative effects on the developing infant.
- There is a reduction in the severity and duration of treatment of Neonatal Abstinence Syndrome (NAS) when mothers on **buprenorphine or methadone** maintenance therapy breastfeed

Medications to Avoid

Drugs that adversely affect lactation:

- Oral Contraceptives
- Decongestants (e.g.: pseudoephedrine)
- Ergot Derivatives (e.g.: bromocriptine)
- Pyridoxine (vitamin B6)

Drugs that may have an adverse effect when ingested by a breastfed infant

- Cyclophosphamide
- Chloramphenicol
- Metronidazole
- Nitrofurantoin
- Anti-thyroid drugs (e.g.: methimazole)
- Psychotropic drugs (e.g.: lithium)
- Radiopharmaceuticals

Can your patient breastfeed if...

She has HIV?



No

- In the developing world, where mortality is increased in non-breastfeeding infants from a combination of malnutrition and infectious diseases, breastfeeding may outweigh the risk of the acquiring HIV infection from human milk.
- Recent studies document that combining exclusive breastfeeding for 6 months with 6 months of antiretroviral therapy significantly decreases the postnatal acquisition of HIV-1

True Contraindications to breastfeeding

- Galactosemia
- Phenylketonuria
- Active TB
- Active Hep C
- Active HSV lesions on breast
- HTLV-1
- Untreated brucellosis
- Ebola
- Maternal HIV
- Maternal CMV - preemies only
- Infants can still receive the expressed milk but mothers should not directly breastfeed:
 - Active TB
 - Varicella
 - COVID-19?

Can your patient breastfeed if...

- She had a glass of wine?



Yes

Occasional alcohol consumption is safe and should not interrupt breastfeeding

- Ingestion of alcoholic beverages should be minimized and limited to an occasional intake but no more than 0.5 g alcohol per kg body weight, which for a 60 kg mother is approximately 2 oz. liquor, 8 oz. wine, or 2 beers
- Alcohol may blunt prolactin response to suckling and negatively affects infant motor development.
- Nursing should take place 2 hours or longer after the alcohol intake to minimize its concentration in the ingested milk.

GOOD EVENING, SIR!
MY NAME IS DARRYL
AND I'LL BE YOUR
WAITER THIS EVENING.



TONIGHT OUR CHEF HAS PRE-
PARED AN ENTREE IM SURE
YOU'LL FIND SATISFYING. IT
IS A SINGLE COURSE, SERVED
WARM, FOLLOWED BY A
GENTLE BACK MASSAGE
PERFORMED PERSONALLY BY
THE CHEF HERSELF.



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AND FOR DESSERT
WE HAVE SWEET DREAMS!



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ENJOY YOUR
MEAL

Where can I get more information?

- Medications

- Infant risk

- Thomas Hale, PhD, RPh at Texas Tech University
 - Medications and Mother's Milk 2017
 - www.infantrisk.com also phone number for consults
 - 10\$ App for phone (includes pregnancy!)

- LactMed

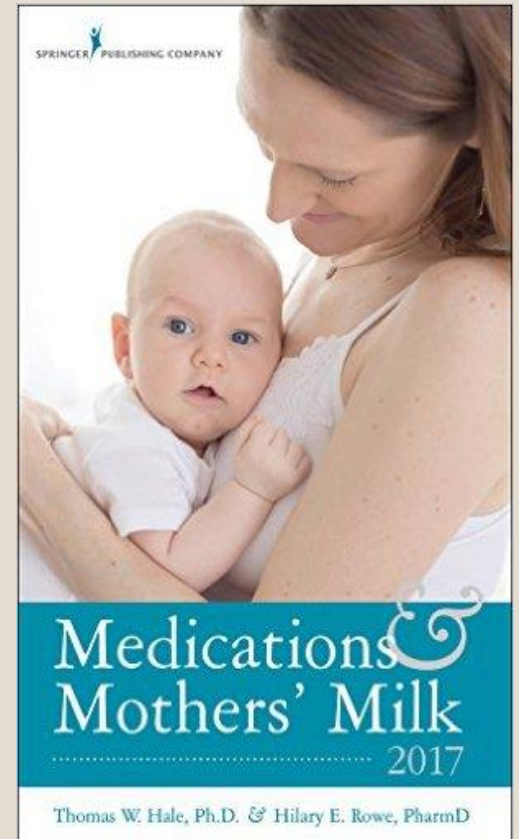
- <https://toxnet.nlm.nih.gov/newtoxnet/lactmed.htm>
 - Free App for phone (not as extensive information as infant risk)

- Radiology

- http://www.acr.org/~media/ACR/Documents/PDF/QualitySafety/Resources/Contrast%20Manual/2016_Contrast_Media.pdf page 101

- Anesthesia

- http://www.bfmed.org/Media/Files/Protocols/Protocol_15_revised_2012.pdf



Organization

La Leche League International

Breastfeeding

LactMed

InfantRisk Center
Providers

MommyMeds

Description

An international
mother-to-mother breastfeeding

com
ed organizati
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ounselors

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d phone

on the safety of
prescription and over-the-counter
medication (phone application)

Web Site

<http://www.llli.org>

[.org](#)

[/newtox](#)

[1](#)

['mobile-](#)

[apps](#)

InfantRisk Center for Health Care Providers



MommyMeds for Mothers



Academy of Breastfeeding Medicine

- www.bfmed.org
- 26 online protocols including Mastitis, Anesthesia, Contraception, Antidepressants, Galactagogues
- Annual membership and meeting

“Frustrated”, “Depressed” and “Devastated” pediatric trainees

- US academic medical centers fail to provide adequate workplace breastfeeding support
- 25% did not have access to private room to pump or breastfeed
- 33% did not meet their breastfeeding goals
- 25% did not meet their breastfeeding duration goals
- Not meeting goals was associated with negative emotions and influenced trainees on how they counseled mothers

Support your colleagues and residents

- Many women feel isolated and guilty when expressing milk for their babies
- Encourage them to take their deserved breaks to pump and stop working for a short time
- Connect them with someone who has been in their shoes (myself, Emily Mallin, Christina Bergin, and Nilda Franco to name a few)



Summary for Covid-19 and Flu

- COVID-19 and Influenza are both spread through respiratory droplets
- Simple hand hygiene and vaccination for influenza are great preventive measures
- No evidence to suggest need for interruption of breastfeeding if ill, but wash your hands and wear a face mask
- Tamiflu safe for breastfeeding moms, and AAP/CDC say prophylax babies who are 3 months or older



Summary

- Breastfeeding is the gold standard for infant nutrition
- There are risks for the mother's health to not breastfeed
- As a hospitalist you will see lactation related issues and should be equipped to answer questions with evidence based answers
- Do not “play it safe” and tell mothers to pump and dump or wean earlier than desired
- Know your limits and refer to those who can answer her questions

