# We lead with heart

NORTHSIDE HOSPITAL HEART INSTITUTE

## Featured Article

### Breastfeeding and Cardiac Prevention: Yes, Breastfeeding Support is Our Job

Breastfeeding remains a critical public health priority in the United States. Approximately 83% of mothers initiate breastfeeding each year. According to the Centers for Disease Control and Prevention (CDC) Breastfeeding Report Card, 78.6% of mothers continue breastfeeding at one month, yet only 55.6% are still breastfeeding at six months.

Breastfeeding cessation is multifactorial. Common contributors include latch and milk transfer difficulties, perceived low milk supply and return to work. However, an especially vulnerable population discontinues breastfeeding at even higher rates: women affected by hypertensive disorders of pregnancy (HDP). A cross-sectional study published in JAMA found that women with HDP are less likely to initiate breastfeeding and more likely to stop earlier than their normotensive counterparts.

Patients with HDP—particularly those diagnosed with preeclampsia—face additional barriers. High-risk deliveries are often physically and emotionally taxing. Many mothers experience separation from their newborns and receive intravenous magnesium sulfate therapy, which may cause drowsiness, headache, flushing, and malaise. These effects can impair their ability to nurse, pump, or hand express during the critical early postpartum window.

In the first several days after birth, frequent breast stimulation is essential to promote prolactin release and establish a robust milk supply. When this early stimulation is delayed or inconsistent, milk production may be insufficient and not adequately increase to meet the infant's needs.

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### Provider Support Techniques

Physicians and Advanced Practice Providers play a vital role in supporting breastfeeding patients—not only during delivery, but throughout pregnancy and the postpartum period. Effective support is proactive, practical, and empathetic.

| Ask Open Ended Questions | Screen for Anxiety and Depression | Use Supportive Language |
|---|---|---|
| ● Invite honest dialogue about breastfeeding | ● Postpartum anxiety, depression and traumatic birth experiences affect breastfeeding success | ● Validate concerns and listen actively |
| ● Reassure mothers who perceive low milk supply - frequent, shorter feeds are normal early on | ● Incorporate routine screening at postpartum visits | ● Collaborate on solutions |
| ● Encourage skin to skin contact for sleepy newborns to stimulate feeding cues | ● Timely intervention improves maternal well being and supports | ● Nonjudgemental counseling builds trust and empowers mothers to continue breastfeeding |

**Practice Point**

By recognizing the unique challenges faced by patients with hypertensive disorders of pregnancy and offering early, consistent support, providers can help improve both breastfeeding outcomes and overall maternal-infant health.

Patients can register at **Northside.com/classes** or scan the QR Code

## Cardio-Obstetric Fast Facts

### Cardiovascular Benefits of Breastfeeding

The American Academy of Pediatrics recommend that mothers exclusively breastfeed for the first 6 months of their baby's life. There appears to be likely cardiovascular benefits for mothers who breastfeed. Women who breastfeed have less rates of high blood pressure; however, early cessation of breastfeeding is more common in women who have had Hypertensive Disorders in Pregnancy.

The lower rates of hypertension and lower blood pressure seems to increase the longer that a women breast feeds. In fact, one study of women who breast fed for longer than 12 months showed a reduction in HTN by 13% (this was after takin into account of confounding variables). While further studies are needed to understand causation, metanalysis supports that breastfeeding should be included in cardiovascular prevention education. Other supportive information for the potential benefits of breastfeeding is listed below.

**Data Highlights:**
Journal of American Heart Association found women who breastfed were:

| 17% | 14% | 12% | 11% |
|---|---|---|---|
| Less likely to die from CVD | Less likely to develop heart disease | Less likely to experience a stroke | Less likely to develop any cardiovascular disease |

### Clinical Research Highlights

- Women who breastfeed have lower rates of hypertension, and the benefit increases with duration. A reduction in hypertension of 13% was observed after more than 12 months of breastfeeding (adjusted for confounders). Meta-analysis supports including breastfeeding in cardiovascular prevention education, though further studies are needed to understand causation.
- A May 2025 study from Ohio State University Wexner Medical Center and College of Medicine found that breastfeeding, particularly after a diagnosis of **gestational diabetes,** was associated with a lower long term risk of ASCVD.

### Clinical Takeaway

Breastfeeding counseling and lactation support should be considered part of postpartum cardiovascular risk reduction, particularly for patients with hypertensive disorders in pregnancy and/or gestational diabetes.

## Resources for Breastfeeding and Safe Prescribing

### For Helping Patients:

**Physician Education and Training to Support Breastfeeding | Breastfeeding | CDC**

### For Prescribing Medication:

**Hales Medications and Mother's Milk**
It is estimated that 50-55 new pharmaceutical drugs come to market every year in the United States. Yet, there are little to no studies that evaluate the safety of the drug in pregnancy and lactation which sometimes results in women not receiving adequate medical care or making the difficult decision to stop breastfeeding or continue breastfeeding and deal with symptoms of their medical condition. All Northside Providers have access to Hales Medications and Mother's Milk which is considered the topmost resource to help guide clinicians when prescribing medication to women who are breastfeeding. Drugs may transfer into human milk if they:

- Attain high concentrations in maternal plasma
- Are low in molecular weight (<500 Da)
- Are low in protein binding
- Pass into the brain easily

Key Points When Prescribing Medications to a Breastfeeding Mother

- Avoid using medications that are not necessary. Herbal drugs, high-dose vitamins, unusual supplements, iodine supplements, zinc supplements, etc. that are simply not necessary should be avoided.
- If the Relative Infant Dose (RID) is less than 10%, most medications are considered relatively safe to use, but again this is dependent on the type of drug taken.

- Choose drugs for which we have published data, at studied doses, rather than those recently introduced.
- Evaluate the infant for risks. Be more cautious with premature infants or neonates.
- Medication used in the first 3 to 4 days generally produces subclinical levels in the infant due to the limited volume of milk.
- Recommend that mothers with symptoms of depression or other mental disorders seek treatment. Most of the medications used to treat these syndromes are safe. Remember, healthy moms make healthy babies.
- Most drugs are quite safe in breastfeeding mothers, while the hazards of using formula are well known and documented. Use donor human milk when the drug is potentially dangerous.
- With some medications, discontinuing breastfeeding for some hours or days may be required, particularly with radioactive compounds and anticancer drugs. If the drug is hazardous to you, it is probably hazardous to your infant.
- Choose drugs with short half-lives, high protein binding, low oral bioavailability, or high molecular weight.

## Commonly Used Postpartum Medications

| Medication | Breastfeeding Category | M/P Ratio | PB | MW | RID |
|---|---|---|---|---|---|
| **Nifedipine** | **L2** | 1 | 92–98% | 346 | 2.3–3.4% |
| **Amlodipine** | **L3** | — | 93% | 567 | 1.72–4.32% |
| **Labetalol** | **L2** | 0.8–2.6 | 50% | 328 | 0.09–1.05% |
| **Metoprolol** | **L2** | 3–3.72 | 10% | 267 | 1.4% |
| **Enalapril** | **L2** | — | 60% | 492 | 0.07–0.2% |
| **Losartan** | **L3** | — | 99.8% | 422.9 | — |
| **Hydrochlorothiazide** | **L2** | 0.25 | 58% | 297 | 1.68% |
| **Spironolactone** | **L2** | 0.51–0.72 | >90% | 417 | 2%–4.3% |

### Key Terminology

**M/P (Milk/plasma ratio):** The ratio of the concentration of drug in the mother's milk divided by the concentration in the mother's plasma. High is considered >1.5 and can indicate the drug is isolated in the milk at higher levels.

**PB (Protein Binding):** Percentage of maternal protein binding. In the blood, most drugs bind to protein. If a drug is highly protein bound, it does not enter the milk as easily. Good protein bind is greater than 90%.

**MW (Molecular weight):** Medications with small molecular weight, <200, easily pass into breastmilk.

**RID (Relative Infant Dose):** Research suggests that anything less than 10% is probably safe.

## Announcements

### Hypertension Management in Pregnancy – Updated Guidance by the American Heart Association

- New guidelines have been released regarding the management of hypertension in pregnant patients.
- These updates are based on findings from the **CHAP (Chronic Hypertension and Pregnancy) trial**.
- The study demonstrated that **earlier treatment and tighter blood pressure control** in patients with chronic hypertension reduces the risk of:
  - Severe preeclampsia
  - Preterm birth
  - Placental abruption
- **Previous practice:** Treatment was often initiated when blood pressure reached **≥160/105 mmHg**.
- **Updated recommendation:** Initiate treatment at **≥140/90 mmHg**.
- **Treatment goal:** Maintain blood pressure **below 140/90 mmHg** in pregnant patients with chronic hypertension.

Providers are encouraged to incorporate these updated thresholds into their management of pregnant patients with chronic hypertension.

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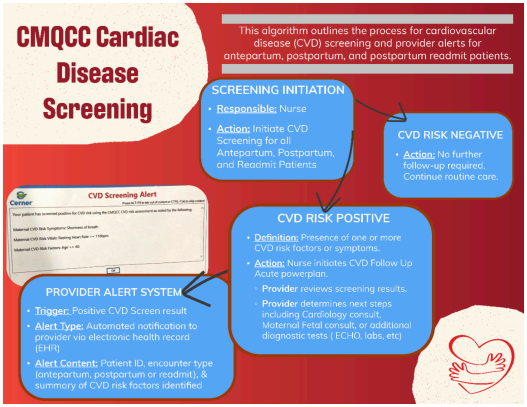
### Nurse Driven Screenings in Women's Services

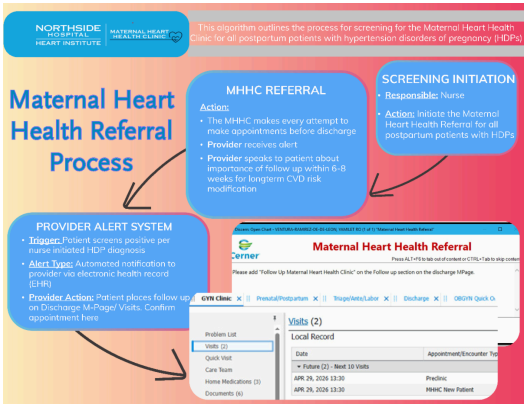
Cardiovascular disease (CVD) risk screening and Maternal Heart Health Clinic (MHHC) referral screening are distinct assessments conducted on all patients within Women's Services. Each evaluation is completed independently and guides patients into separate clinical care pathways based on screening outcomes. Patients may screen positive on

both assessments; in such cases, both care pathways should be initiated to ensure the clinical objectives of each screening process are appropriately addressed..

For obstetrics providers, a **Provider Alert** will appear upon opening the chart of any patient who has screened positive. This alert is intended to enhance clinical awareness, streamline next steps and guide appropriate follow-up.

Please refer to the algorithms below that outline the screening workflow




## Provider Resources and Patient Education

Join us for our quarterly Cardio – Obstetrics Case Presentations for CME credit. Our next session is July 9, 2026 from 7:00AM – 8:00AM. Watch for the CME flyer! Preregistration is required for all CME webinars.

**Additional CMEs and Resources Links:**
ACC has created Reproductive Health and Cardio Obstetrics Member Section. ACC states “The Mission of this Section is to provide members with knowledge in a structed and organized approach on the cardiovascular care of patients surrounding all aspects of pregnancy and reproductive health”. Check out the Reproductive Health & Cardio-Obstetrics Member Section - American College of Cardiology if you are Interested in learning more or joining the section.

**SMFM 2026 Global Congress** October 7-10, 2026 Utrecht, Netherlands

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