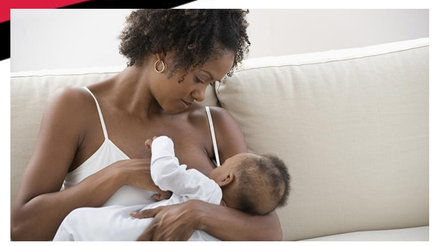
UNIVERSITY of MARYLAND
SCHOOL OF NURSING

Breastfeeding and Maternal Post-partum Blood Pressures



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Background & Significance

Hypertensive disorders of pregnancy (HDP) is:

- broad term encompassing: chronic HTN, GH, preeclampsia, eclampsia, and HELLP
- the leading cause of maternal mortality most heavily impacted are black women (20.9%) and ages 35-44 (18%)
- those diagnosed are at greater risk of experiencing cardiovascular events later in life

More recent studies have linked breastfeeding:

- to lower maternal SBP
- a reduced risk of metabolic syndrome, CVD, and stroke development.

PICOT & Methods

PICOT: In postpartum mothers with hypertensive disorders, does breastfeeding education compared to traditional management, help to regulate maternal blood pressures in the postpartum period?

- HSHSL of University of Maryland, OneSearch
- Search terms "hypertensive disorders of pregnancy" AND "breastfeeding"
- Inclusion filters:
  - publication years 2018-2024
  - articles
  - available online.
- Yielded 837 results
- 7 articles were chosen to encompass full BF spectrum and maternal CV health immediate and long-term

CNL Role

- Health promotion and risk reduction (King & O'Toole, 2021).
- Promoting BF education to all expectant mothers
- BF benefits for mother and neonate
- Focused education on risk for CVD and metabolic syndrome

Evidence Summary Table

Authors (year)	Purpose/ Hypothesis	Results	Evidence Level & Quality
Burgess et al., (2019)	Correlate women with preeclampsia and BF and postpartum BP	• ↓ SBP (p=0.03) • ↓ DBP (p=0.04) • No significant difference in those with chronic HTN or late onset preeclampsia	Level IV; Level II
Jacobson et al., (2018)	Determine association between BF & stroke risk. Does risk differ based on race/ethnicity and age	• 71.8% non-Hispanic White women reporting stroke • Non-Hispanic black women ↑report of never BF (p<0.01) • Women reporting BF ↓ risk of stroke by 23% (p<0.01)	Level IV; Level II
Magnus et al., (2023)	Determine association of improved cardiometabolic profile in women with HDP and BF duration or exclusivity significance	• Any duration of BF associated with ↓ CRP with ≥6 mths most significant (p<0.001) • Longer BF duration, better cardiometabolic profile	Level IV; Level II
Matsunaga et al., (2022)	Determine association between BF & metabolic syndrome in parous women >55 yo.	• 32-<55 yo. at ↓ SBP (p=0.032), LDL (p=0.002), & glucose (p=0.039) • >55 yo # of births (p=0.016) and total yrs BF (p=0.001) reduced risk of metabolic syndrome	Level IV; Level II
Pathirana et al., (2023)	Assess cardiometabolic health at 3 years postpartum when BF ≥ 6 mths	3 yrs postpartum and BF: • ≥6 mths: ↓ BMI, waist circumference, SBP, DBP, MAP • ≤6 mths: ↓ triglycerides, ↑HDL	Level IV; Level II
Rameez et al., (2019)	A systematic review and meta-analysis determining association between lactation and risk of HTN and DM	BF for >12 mths was associated with a relative risk reduction of 13% for hypertension (p=0.01)	Level I; Level II
Yu et al., (2020)	Investigate short-term effects of BF on CVD risks 6 mths postpartum of pregnancies complicated with HDP, GD, IUGR, abruption, or preterm birth	• HDP (49%) and BF for <6 mths (51%) in participants • ↓ biochemical profile, BMI (p<0.001), waist circumference, and SBP (p=0.001) • Lifetime CVD risk ↓ (p=0.003) & Metabolic syndrome risk ↓ (p=0.049)	Level IV; Level II

Conclusions & Future Research

This set of evidence suggest

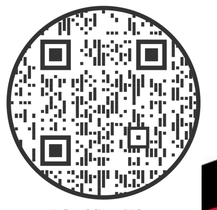
- BF after childbirth improves postpartum BP
- Decreases risk of CVD and metabolic syndrome later in life
- The longer a mother can breastfeed the more benefit to her health, but any duration has benefit

Future longitudinal studies following women with HDP throughout the rest of their lives who breastfeed would be beneficial in determining more CV positive stress tests, electrocardiograms, cardiac enzymes, full blood count, blood glucose, and kidney and liver function tests.

Implications For Practice

- Prenatal BF education helps achieve breastfeeding self-efficacy
- Prenatal BF support ↑self-efficacy scores (p<0.001)
- Supports nurse's need for continuing education of BF EBP
- Nurses to provide support, encouragement, education, and resources to all mothers, most especially those with HDP

Key Terms



References

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