

Boston Medical Center Maternity Care Guideline
Guideline: Prenatal Aspirin for at Risk Pregnant Pregnancies

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Updated: Date

Introduction

- Definition
 - Prenatal aspirin, also known as 81 mg or low dose aspirin, is currently recommended in pregnancy for the prevention of morbidity and mortality from preeclampsia according to the USPSTF and ACOG.

- Brief significance in pregnancy
 - Prenatal aspirin has been shown in numerous RCTs and meta-analyses to prevent preeclampsia. At risk women include:

Table 1. Clinical Risk Assessment for Preeclampsia

Risk Level	Risk Factors	Recommendation
High	<ul style="list-style-type: none"> ● History of preeclampsia, especially when accompanied by adverse outcome ● Multifetal gestation ● Chronic hypertension ● Type 1 or 2 Diabetes ● Renal disease ● Autoimmune disease (SLE, APS) 	Recommend low-dose aspirin if the patient has one or more of these high risk factors
Moderate	<ul style="list-style-type: none"> ● Nulliparity ● Obesity (BMI>30) ● Family history of preeclampsia (mother or sister) ● Sociodemographic characteristics (African American race, low socioeconomic status) ● Age 35 years or older ● Personal history factors (LBW, SGA previous adverse pregnancy outcome, more than 10-year pregnancy interval) 	Consider low-dose aspirin if the patient has more than one of these moderate-risk factors
Low	<ul style="list-style-type: none"> ● Previous uncomplicated full-term delivery 	Do not recommend low-dose aspirin

Adapted from ACOG, 2018.

- Prevalence
 - Approximately 2-8 % of pregnancies are affected by preeclampsia, which is the second leading cause of maternal mortality worldwide. In the United States, 12% of maternal deaths are related to preeclampsia. Morbidity is much more prevalent, with over one third of severe maternal morbidity related to preeclampsia. In addition, 15% of preterm birth in the United States can be attributed to iatrogenic

preterm birth secondary to severe preeclampsia.

- At Boston Medical Center, chart review has shown hypertensive diseases of pregnancy occur in approximately 1 in 3 pregnancies and that 20% of pregnant patients have at least one high risk factor and an additional 60% have 2 or more moderate risk factors.
- Maternal/fetal risks
 - Many studies have examined the safety of aspirin in pregnancy. There is no increased risk of hemorrhage to the mother.
 - Numerous case control trials and RCTs have looked at the safety for the fetus. Systematic reviews have found no increased risk of adverse fetal or neonatal effects associated with low-dose aspirin use.” Studies performed looking specifically at prenatal aspirin found no increase in congenital abnormalities, neonatal hemorrhage, or intracranial hemorrhage.

Treatment/Management

- 81mg aspirin taken before bed, should be started between 12-16 weeks gestation for at risk women. Current guidelines recommend starting prenatal aspirin between 12-28 weeks gestation, but the greatest effect in risk reduction has been shown if started before 16 weeks. There is insufficient evidence to recommend for or against starting prenatal aspirin for patients at risk after 28 weeks gestation. Aspirin should be discontinued after delivery.

Contraindications

- Prior allergic or anaphylactic reaction to aspirin or other NSAIDs
- History of nasal polyps or asthma with aspirin induced bronchospasm
- Relative contraindications include history of gastrointestinal bleeding, active peptic ulcer disease, active liver disease, or history of gastric bypass or sleeve surgeries.

Logistical Practice for BMC and CHC providers

- BMC providers can use EPIC smartphrases (Appendix B)
 - patient screening: Official: .bmcobPNA
 - postpartum: .OBASPIRINNEXTPREGNANCY

Patient Education/Patient Education Materials

- Appendix A. You can find downloadable PDF copies of educational materials in English, Spanish and Haitian Creole at: <https://www.prenatalaspirin.com/>

Appendix A

What You Need To Know: High Blood Pressure in Pregnancy



Also Known as Preeclampsia or Gestational Hypertension

- ▶ It's a condition that can develop during pregnancy that can cause:
 - ▶ Headache, swelling in hands and feet, and abdominal pain
- ▶ It is harmful for both Mom and Baby:
 - ▶ For **Baby** it can slow growth and can cause **Preterm birth**.
 - ▶ For **Mom** it can lead to seizures, organ problems, and even death.

How common is High Blood Pressure in Pregnancy?

3 out of 10 women at Boston Medical Center have high blood pressure in pregnancy¹



Who is at risk?

You are at risk of developing high blood pressure in pregnancy if you have...

ANY of the following high-risk factors:	Several of the following moderate-risk factors:
<ul style="list-style-type: none"> • High blood pressure (chronic or in pregnancy) • Diabetes • Twins/triplets • A history of kidney problems • An autoimmune disease (example: lupus) 	<ul style="list-style-type: none"> • This will be your first baby • Excess of body fat (BMI >30) • Mother or sister had preeclampsia • African American/Black • You receive public health insurance • 35 or older • History of low birth weight baby • Previous miscarriage or complicated pregnancy • It's been more than 10 years since your last pregnancy

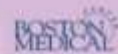
Based on USPSTF risk criteria²

What can I do to prevent complications of high blood pressure?

Ask your provider about taking prenatal aspirin every night starting at 12 weeks²

References: (1) T. Adegoke et al., Racial Disparities in Perinatal Outcomes among U.S.- and Foreign-born Women, May 2017.
 (2) American College of Obstetricians and Gynecologists, Hypertension in pregnancy, Washington, DC: American College of Obstetricians and Gynecologists; 2013.
 (3) Final Recommendation Statement: Low-Dose Aspirin Use for the Prevention of Morbidity and Mortality From Preeclampsia: Preventive Medication. U.S. Preventive Services Task Force, December 2014.

What You Need To Know: Prenatal Aspirin



- ▶ It's also known as **low-dose, baby, or 81mg** aspirin
- ▶ For 30 years research has shown that prenatal aspirin has many benefits.
 - ▶ It does not harm mom or baby.⁴

Benefits of prenatal aspirin:

- It is **safe** to use in pregnancy
- Works within the placenta
- Helpful for both you and your baby
- Lowers your chance of a premature baby
- Lowers your chance of a low birth-weight baby

Side effects or risks of prenatal aspirin:

- Will **not** cause you to have increased bleeding
- Does **not** reach the baby's blood, **has not** been shown to have negative effects on the baby's initial development
- Does **not** increase risk of miscarriage
- Does **not** need to be stopped before delivery



Talk to your provider about your risk factors



Take prenatal aspirin starting at 12 weeks



Healthy Mom and Baby

Show this Card to your Pharmacist

References: (4) Henderson JT, et al., Low-Dose Aspirin for the Prevention of Morbidity and Mortality From Preeclampsia: A Systematic Evidence Review for the U.S. Preventive Services Task Force, Evidence Synthesis No. 112, AHRQ Publication No. 14-05207, EF-1, Rockville, MD: Agency for Healthcare Research and Quality; 2014.

Appendix B
.bmcobpna

Patient was screened for risk of preeclampsia.

At least **1** Major Risk Factor:

- None
- History of preeclampsia
- Multifetal gestation
- Chronic hypertension
- Diabetes
- Renal disease
- Autoimmune disease

Several Moderate Risk Factors:

- None
- Nulliparity
- BMI>30
- Family history of preeclampsia
- African American
- Public Health Insurance
- Age \geq 35yo
- History of low birth weight
- Previous adverse pregnancy outcome
- Greater than 10 year inter pregnancy interval

Patient Qualifies for prenatal aspirin? Yes/No

Patient Prescribed prenatal aspirin? Yes/No

.obaspirinnextpregnancy

As current pregnancy, labor, or postpartum period was complicated by preeclampsia, the patient was counseled about her increased risk for complications of high blood pressure in a future pregnancy. We discussed the need for prenatal aspirin (81 mg) beginning at 12 weeks in a future pregnancy. Discussed how prenatal aspirin has a significant risk reduction of preeclampsia, preterm labor, and IUGR

References

Carroll LM, Yang Q, Sandhu KA, Vragovic O, Abbott J. Indications for Preterm Birth at an Urban Safety Net Hospital. *Society for Maternal Fetal Medicine*.

Henderson JT, Whitlock EP, O'Connor E, Senger CA, Thompson JH, Rowland MG. Low-Dose Aspirin for the Prevention of Morbidity and Mortality From Preeclampsia: A Systematic Evidence Review for the U.S. Preventive Services Task Force. Evidence synthesis no. 112. AHRQ publication no. 14-05207-EF-1. Rockville, MD: *Agency for Healthcare Research and Quality*; 2014.

LeFevre, M. (2014). Low-Dose Aspirin Use for the Prevention of Morbidity and Mortality From Preeclampsia: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med*, 161, 819-826.

Low Dose Aspirin Use During Pregnancy. ACOG Committee Opinion no 743. American College of Obstetricians and Gynecologists. *Obstet Gynecol* 2018; 132e44-52.