

NPMS Releases Consensus Statement on Venous Thromboembolism During Pregnancy

Key Points for Practice

- At the first prenatal visit, VTE risk should be evaluated and prophylaxis should be given based on recommendations similar to those from the ACOG and ACCP.
- Antepartum women at low risk of bleeding or impending birth who have been in the hospital for 72 hours or more should be given LMWH once per day or UFH twice per day.
- Postpartum women with multiple previous VTE episodes, previous VTE and high-risk thrombophilia, or previous VTE and acquired thrombophilia should be given treatment-dose LMWH or UFH for six weeks.

From the AFP Editors

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This series is coordinated by Sumi Sexton, MD, Associate Deputy Editor.

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Maternal morbidity and mortality are commonly caused by venous thromboembolism (VTE), which accounts for approximately 9% to 31% of pregnancy-related deaths, depending on the country. The main strategy for preventing VTE-related mortality is thromboprophylaxis, but guidance regarding its use differs across specialties and organizations, including the Royal College of Obstetricians and Gynaecologists (RCOG), the American College of Obstetricians and Gynecologists (ACOG), and the American College of Chest Physicians (ACCP).

For this reason, the National Partnership for Maternal Safety (NPMS), a group made up of a variety of leaders in women's health care, has created a safety bundle to review current guidance and make recommendations. The aim is to have all the birthing centers in the United States adapt this bundle to their patients and resources, rather than a single national protocol. The bundle is an overview of current recommendations to help guide application and create uniformity across practices. This document was developed by official representatives from the American Association of Blood Banks; the American Academy of Family Physicians; the American College of Nurse-Midwives; the ACOG; the Association of Women's

Health, Obstetric and Neonatal Nurses; the Society for Maternal-Fetal Medicine; and the Society for Obstetric Anesthesia and Perinatology.

Outpatient Antepartum

At the first prenatal visit, VTE risk should be evaluated. Prophylaxis should be given based on recommendations similar to those from the ACOG and ACCP. Women with multiple previous VTE episodes, previous VTE and high-risk thrombophilia (e.g., factor V Leiden homozygosity, prothrombin gene mutation homozygosity), or previous VTE and acquired thrombophilia (e.g., antiphospholipid antibody syndrome) should be given a treatment dose of low-molecular-weight heparin (LMWH) or unfractionated heparin (UFH). Those with previous idiopathic VTE, VTE with pregnancy or oral contraceptive use, or VTE and low-risk thrombophilia (e.g., prothrombin gene mutation heterozygosity, protein C or S deficiency); high-risk thrombophilia (including acquired); or a family history of VTE with high-risk thrombophilia should be given a prophylactic dose of LMWH or UFH. No treatment is needed with a history of provoked VTE or a low-risk thrombophilia with or without a family history of VTE.

Women receiving VTE prophylaxis combined with low-dose aspirin to prevent preeclampsia, should stop taking the aspirin at 35 to 36 weeks' gestation.

Inpatient Antepartum

Antepartum women at low risk of bleeding or impending birth who have been in the hospital for 72 hours or more should be given LMWH once per day or UFH twice per day. If hospitalized, those already receiving UFH or LMWH should continue this regimen. Mechanical thromboprophylaxis

or a prophylactic dose of UFH is indicated in women with a high risk of bleeding or impending birth. Using UFH instead of LMWH may also make it easier to perform intrapartum neuraxial anesthesia (epidural).

Vaginal Birth

Use of pneumatic compression in bed in intrapartum women and administration of LMWH or UFH in postpartum women are recommended for those with a history of VTE or thrombophilia. Prophylaxis with LMWH or UFH is an option in women with a high risk of VTE based on RCOG criteria or Padua Prediction Score of at least 4. The Padua score and the Caprini score are commonly used VTE-assessment tools in nonobstetric patients. These tools have been modified for use in obstetric patients and can be found online at <http://links.lww.com/AOG/A834>.

Cesarean Delivery

Use of pneumatic compression perioperatively is recommended in women having a cesarean delivery if they are not receiving pharmacologic prophylaxis; either option should be used until the patient is able to walk. In those with risk factors, pharmacologic thromboprophylaxis is recommended. Because it is often difficult to consistently determine which women have risk factors and because compliance with mechanical devices is often poor, birthing centers can opt to have all women undergoing cesarean delivery receive postoperative thromboprophylaxis with UFH or LMWH, unless it is contraindicated. The best time to provide heparin after surgery is unknown; however,

routinely providing prophylactic UFH to those ready for discharge from the postanesthesia care unit is appropriate.

Extended Postpartum

The guidance for assessing risk and providing thromboprophylaxis in women requiring additional anticoagulation postpartum is based mainly on the ACOG and ACCP recommendations. Women with multiple previous VTE episodes, previous VTE and high-risk thrombophilia, or previous VTE and acquired thrombophilia should be given treatment-dose LMWH or UFH for six weeks. Those with previous provoked or idiopathic VTE, VTE with pregnancy or oral contraceptive use, or VTE and low-risk thrombophilia; high-risk thrombophilia with or without a family history of VTE; or low-risk thrombophilia with a family history of VTE should receive prophylactic-dose LMWH or UFH for six weeks. No treatment is needed in the presence of low-risk thrombophilia alone.

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