Getting to the Heart of the Matter: Hypertension and Pregnancy among the Black Community

My baby sister was 35 years old and pregnant with her first child. As a family, we were ecstatic. The family was expanding, and I was about to be an aunt for the third time. She was in her 3rd trimester and very pregnant, but she was up there in the choir singing and dancing her heart out at a memorial concert. I, along with many others, was shocked at how energetic and agile she was that far into pregnancy. However, when the concert was over, I looked at her feet and they were very, very swollen. I was concerned and told her to speak with her doctor immediately. Three days later, she got a call from her doctor to check in to the hospital, 6 days before her actual due date. Unbeknownst to me, she had dropped off a urine sample the day before the concert. Test results revealed that she had preeclampsia (a type of high blood pressure that is specific to pregnancy) and they needed to deliver the baby. Left untreated, preeclampsia can be very dangerous for mom and baby. My sister scrambled to get everything together and rushed to the hospital, and baby Jordan, my nephew, was born. My sister is a strong, educated, physically fit African American woman, and thank God her story ended well. However, that is not always the case. It could have gone a very different way.

Hypertensive disorders of pregnancy (HDP) are a group of medical conditions that involve high blood pressure during pregnancy. High blood pressure, also known as hypertension, is a condition where the force of the blood against the walls of the arteries is too high. This can damage the arteries and increase the risk of heart attack, stroke, and other serious health problems. Hypertensive disorders of pregnancy are a leading cause of maternal death and can put both mother and baby at risk for serious complications during pregnancy.

There are four main types of hypertensive disorders of pregnancy:

- **Chronic hypertension**: High blood pressure that occurs before pregnancy or before 20 weeks of gestation, or that persists longer than 12 weeks after delivery.
- **Gestational hypertension**: High blood pressure that develops after 20 weeks of gestation, without signs of organ damage or protein in the urine.
- **Preeclampsia**: High blood pressure that develops after 20 weeks of gestation, with signs of organ damage or protein in the urine.
- **Preeclampsia superimposed on chronic hypertension**: Chronic hypertension that worsens or causes organ damage or protein in the urine during pregnancy. This means that you have two problems with your blood pressure.

Chronic hypertension affects approximately 85,000 births (2.3%) in the United States each year. Unfortunately, the number of pregnant women diagnosed with HDP is increasing and more maternal deaths are occurring due to complications from these conditions in pregnancy. On top of that, the rates between white people and other racial groups are widening, especially among black pregnant women during pregnancy. According to a Centers for Disease Control and Prevention (CDC) report, HDP affected at least 1 in 7 delivery hospitalizations in the United States from 2017 to 2019, and about a third of those who died during hospital delivery had some form of HDP. Some of the other key findings of the report were that:

- HDP affected more than 1 in 5 delivery hospitalizations of Black women and about 1 in 6 delivery hospitalizations of American Indian and Alaska Native women, compared to 1 in 8 delivery hospitalizations of White women.
- Black women had higher odds of entering pregnancy with chronic hypertension and developing severe preeclampsia.
- Black women and American Indian and Alaska Native women had higher rates of maternal death due to HDP than White women.

The causes of hypertensive disorders of pregnancy are not fully understood, but some risk factors include obesity, diabetes, kidney disease, family history, multiple pregnancies, and advanced maternal age (over age 35) and the rates are higher among communities of color compared to white people. In general, more than 50% of black women have hypertension, compared to 39% of non-Hispanic white women and 38% of Hispanic women. The symptoms of hypertensive disorders of pregnancy may vary depending on the type and severity, but some common ones are headaches, swelling, blurred vision, stomach pain, and reduced amounts of urine than usual.

HDP can be dangerous for both you and your baby, but it can be prevented and treated with proper care and attention. To reduce the chance of HDP, pregnant women and those planning for pregnancy can take the following steps:

- Get early and regular prenatal care. They can check your blood pressure and screen for any signs of HDP[1].
- Take your blood pressure medication to lower your blood pressure and prevent complications. They may also advise you to take a low-dose daily aspirin after 12 weeks of pregnancy to reduce the risk of preeclampsia[2].
- Maintain a healthy weight and lifestyle. Try to lose weight before you conceive and gain weight gradually during pregnancy according to your doctor's guidelines. Exercise regularly, eat a balanced diet, avoid smoking, limit alcohol and salt intake, and manage stress[23].
- Monitor your blood pressure at home. Your doctor may suggest that you use a home blood pressure monitor to keep track of your blood pressure between visits.

MotherToBaby has helpful fact sheets on smoking, alcohol, stress and exercise, and low-dose aspirin. You can also contact us for information on medications that may be recommended by your healthcare provider for treatment. We are a free service that is available for everyone. The heart of the matter is that you do what is best for you and your baby and we are here to help you through all stages of pregnancy from the time you hear a heartbeat on a monitor and until the time your baby captures your heart.

Resources:

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- My fear and anxiety over my soon-to-arrive first child is overwhelming on a daily basis…I'm angry some days, sad some days, and panicked other days.
- My anxiety and depression levels has been higher than normal
- I'm scared when I go anywhere or see anyone, even when I'm maintaining social distancing.
- We planned on having an amazing support team and the rug was pulled from under us.
- I realize this is uncharted territory, but I have not felt supported as a first-time mother.[1]

These were the sentiments of pregnant individuals going through the pandemic. It was an unprecedented event and as MotherToBaby Specialists we were challenged with dealing with the anxiety of expectant parents as they tried to get reliable information and deal with their fears, anxiety, and frustrations. Fortunately, as time went on, the infection did not appear to increase the chance of birth defects but now there is a question of the emotional toil it put on pregnant women.

Post-traumatic stress disorder (PTSD) is a condition of persistent mental and emotional stress that occurs after suffering a stressful or extremely traumatic event. Unlike post-traumatic stress that lessens over time, the symptoms of PTSD do not fade. Symptoms of PTSD fall into the following four categories and can vary in severity:

- **Intrusion**: may include intrusive thoughts or distressing memories, flashbacks, nightmares
- **Avoidance**: may include avoiding thinking or talking about the event or their feelings; avoiding things that remind them of the event (people, places, activities).
- **Negative changes in thinking or mood:** may include lack of memory on details about the event; negative thoughts and feelings about themselves or others; feeling numb or detached from others; loss of interest in activities.
- **Changes in physical and emotional reactions (arousal):** may include being irritable and having angry outbursts; self-destructive behavior; having problems concentrating or sleeping.

In general, PTSD occurs more often in women than in men and in the pregnant population more than non-pregnant individuals. According to some studies, 3% to 19% of pregnant women experience PTSD.[2] When it comes to psychiatric disorders during pregnancy, PTSD after childbirth or postpartum PTSD is considered the third most common mental health disorder after depression and nicotine dependence.[3]

If left untreated or poorly treated, PTSD can have long lasting effects not only for the pregnant woman but also in her relationships with other people, especially family, and interfere in bonding with their child and breastfeeding that can have long-lasting impact on the child. Pregnant women with untreated PTSD have a higher chance of experiencing negative birth outcomes including gestational diabetes (diabetes that develops during pregnancy), preeclampsia (severe high blood pressure), low birthweight (weight at birth of < 2500 grams,5.5 pounds), and preterm birth (before 37 weeks pregnancy). Also, quite alarming, PTSD is closely linked to attempting or committing suicide and substance abuse, two leading causes of maternal death in the United States.[3]

We know that the pandemic was a stressful situation for the entire country and especially pregnant women, but what were the long-term effects, particularly in regard to PTSD. In general, risk factors for postpartum PTSD include, but are not limited to, the fear of childbirth, prenatal health concerns (preeclampsia, birth defects), the lack of emotional/social support, depression and anxiety. During the pandemic the primary concern was the risk of infection for themselves and for their child before birth and after. Also, birth plans had to be changed due to hospital restrictions. They did not have the social support that they expected or planned with their doulas, partners, family or friends. The lack of social support was not only an issue during childbirth but remained after birth due to stay-at-home orders. Furthermore, expectant parents may have had to face other problems amplified by the pandemic like unemployment and the loss of a loved one. The sense of security and community was greatly affected during the pandemic and then expectant parents had to navigate a new world while just becoming parents, as expressed by pregnant women above. All of these factors can create a traumatic experience of childbirth and raise the chance for PTSD.

There have been multiple studies investigating the effects of the COVID-19 pandemic during pregnancy. While studies may have differed in their approach to review this topic, the results generally showed that giving birth during the pandemic had many effects on the pregnant population and that PTSD was quite common. Also, rates of PTSD were higher among Black and Latinx pregnant women than whites and lower socio-economic status (i.e., less educational and income).

Recommendations:

There is a call for PTSD to be screened during pregnancy and after to make sure that no one falls through the cracks. It is suggested that providers who had patients deliver in the early part of the pandemic, follow-up with them to make sure they are coping well. Not everyone who experiences PTSD will need counseling, but pregnant women should know about their options.

"Trauma is perhaps the most avoided, ignored, belittled, denied, misunderstood, and untreated cause of human suffering," said Peter Levine, PhD, trauma specialist. For pregnant individuals, if your symptoms are interfering with your quality of life, please speak with your healthcare professional so that you can get the assistance that you need. ***As MotherToBaby information specialists we can connect you to the resources that can promote your health and well-being. We provide information about medications used to treat PTSD as well as exposure to anxiety, depression, and stress on pregnancy and breastfeeding. We are just one important resource that new and expecting parents can rely on for confidential information. Contact us today or visit our Resource Hub on Mental Health during pregnancy and breastfeeding.***

There are resources available to help you.

Postpartum Support International: https://www.postpartum.net/learn-more/postpartum-post-traumatic-stress-disorder/

National Maternal Mental Health Hotline: **1-833-943-5746 (1-833-9-HELP4MOMS)**

https://mchb.hrsa.gov/national-maternal-mental-health-hotline

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Question 1*: I work in healthcare and received the first dose of COVID vaccine. But after receiving the shot, I found out I was pregnant. I changed jobs so that I am not at significant risk anymore. Should I get the second shot?*

Question 2*: I'm pumping and supposed to get the COVID vaccine. I know there isn't much to say on the COVID vaccine but wondering if you would recommend getting it or not?*

These are just a sample of the questions that we have received from individuals who are trying to make the best decisions for themselves during pregnancy and breastfeeding. Juggling all of the information can be daunting and concerns about how quickly the vaccine came on the market and the lack of data for pregnant and breastfeeding individuals has caused a great deal of uncertainty. Well, it is for situations like this that MotherToBaby exists. We are here to help, so let's get to it!

First, is the COVID-19 vaccine safe since it came on the market so fast?

There are many reasons why the vaccine was able to come to the market in a short period of time. One of the reasons is due to medical advances in vaccine development which allowed researchers to develop the vaccine in a shorter period of time than traditional vaccines. The technology used to develop the Pfizer and Moderna COVID-19 vaccines (mRNA) was not new and has been around for some time. While these are the first vaccines on the market using mRNA technology, mRNA was being used to study other viruses. Secondly, due to collaborative efforts, China promptly shared genetic information about the COVID-19 virus, so scientists could start working on vaccines pretty early.

Importantly, the criteria for evaluating vaccine safety did not change and had to be met regardless of the pandemic. According to Dr. Anthony Fauci, a respected infectious disease expert and the director of the National Institute of Allergy and Infectious Diseases, the process has been transparent and independent of the influence of pharmaceutical companies or politics. Each vaccine trial had a safety and data monitoring board of scientists that reviewed the data independent from any influence of the pharmaceutical companies. Once the data satisfied the requirements of the board, the companies submitted the data to the FDA (Food and Drug Administration) and a "premier" group of scientists along with their advisory committee worked together to make sure the data met the required standards. The process was transparent and independent and everyone can take a look at the data. Because COVID-19 is so contagious and widespread, it did not take long to see if the vaccine was effective in those who were vaccinated voluntarily. No corners were cut; it was still a thorough process to bring a vaccine to the market that was safe and effective.

Will it affect my ability to get pregnant?

Concerns about the vaccines' impact on fertility were generated by false social media reports claiming that the vaccine would cause the body to falsely attack a protein that is needed to attach the placenta to the uterus and then develop properly. This is false because the COVID-19 vaccine triggers the body's immune system to fight the specific protein on the coronavirus surface. It is a targeted response against the coronavirus and no other parts of the body. **Therefore it will not affect fertility including those who go thru in-vitro fertilization methods (IVF).** As a matter of fact, 23 women who were involved in the trials became pregnant. Only one individual suffered a pregnancy loss and she did not receive the vaccine but rather the placebo.

Is the vaccine safe for pregnant and breastfeeding women?

While there are no safety data specific to the use of the vaccine during pregnancy and breastfeeding, the American College of Obstetricians and Gynecologists (ACOG) recommend that COVID-19 vaccines should not be withheld from pregnant or breastfeeding individuals who meet the criteria for vaccination based on ACIP-(Advisory Committee on Immunization Practices) recommended priority groups. Based on the history of other similar vaccines (inactivated) in pregnancy and breastfeeding, experts do not believe that mRNA vaccines (like the Pfizer and Moderna vaccines) would increase the risk of harm to the fetus or to infants. It is encouraged that you talk with your healthcare provider about

the risks and benefits of getting the vaccine during pregnancy.

Does the vaccine cause serious side effects?

There have been claims on social media that the virus can cause severe shaking and convulsing from very convincing videos and that the government is not telling the truth about the safety of the vaccines. The Centers of Disease Control (CDC) and the FDA report that the most common side effects are pain where the vaccine is injected, body aches, headaches or fever. These symptoms generally do not last more than two days. If they last longer, you can call your doctor. In regard to the shakes and convulsions, more than 51 million doses of the vaccine have been given globally so far and the data has not identified these symptoms as side effects of the vaccine.

You can report side effects and reactions using either of two systems:

- **V-safe** is a new smartphone-based, after-vaccination health checker for people who receive COVID-19 vaccines.
- **Vaccine Adverse Event Reporting System (VAERS)** is the national system that collects reports from healthcare professionals, vaccine manufacturers, and the public of adverse events that happen after vaccination

After receiving the vaccine, it is still important to wear face masks, wash your hands, and socially distance. The vaccine doesn't make you immune, but it helps your body to fight off the effects to give you a fighting chance if you get infected. So please still follow all the guidelines after receiving the shot.

Myths about the vaccine

I have heard many falsehoods circulating on social media that have had many of my friends and family question getting the vaccine including but not limited to:

- Getting the vaccine gives you COVID
- The COVID vaccine enters cells and changes your DNA
- COVID-19 vaccine was developed with or contains controversial substances such as implants, microchips or tracking devices.
- More people will die from the side effects of the vaccine than the virus

These claims have no basis in fact; please check out these resources for more information: ***COVID-19 Vaccine Myths Debunked*** *and* ***COVID-19 Vaccines: Myth Versus Fact***.

Please get your information from trusted scientific resources or institutions like the FDA, CDC, ACOG, Mayo Clinic, John

Hopkins, Harvard Med or those that end with .org or .edu.

MotherToBaby also has a webpage devoted to COVID and the vaccine filled with information and resources that you can review for pregnant and lactating individuals:***COVID 19: What You Need To Know***

In addition, MotherToBaby is doing its best to gather information for pregnant and lactating individuals by conducting studies. If you're pregnant or breastfeeding and tested positive for COVID-19, please consider enrolling in our observational study. You will not be asked to take or change any medications, and you can participate from the comfort of your home.

The Take Away

Overall, whether you are planning for pregnancy, pregnant or breastfeeding, based on the history of other vaccines, you do not have to be afraid to get the COVID-19 vaccine. The data from clinical trials has been reassuring and no corners were cut. Please seek out solid medical advice from trusted resources. The goal of the vaccine is to protect you and not harm you.

So if you make the decision to get the COVID-19 vaccine, roll up your sleeves with confidence and say, "Go ahead, hit me with your best shot!"

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If you have listened to the news lately, you have probably heard of the outbreak of lung injuries and related deaths associated with e-cigarettes and vaping products. Breaking news by health experts have reported that tetrahydrocannabinol (THC) was present in most of the samples of the products and lung tissue collected from the injured individuals, but Vitamin E acetate was present in all of the samples that have been tested to date. While this is a major breakthrough, the experts are not ready to draw any conclusion as of yet, for it is possible that there are other ingredients involved. Here at MotherToBaby we strive to prepare for the questions that may arise from hot topics such as this for the women and providers we serve. Therefore, this seems as good a time as any to ask, "What do we know about vaping and pregnancy?" For the purpose of this blog, I'm going to focus on nicotine vaping.

What are ENDS?

Electronic nicotine delivery systems (ENDS) describe a variety of products that includes vaporizers, vape pens, hookah pens, tank systems, mods and electronic cigarettes (e-cigarettes). Although ENDS were originally developed as an alternative way to inhale tobacco products (like nicotine), the devices are now also used to vape other substances, like cannabis. Each of these devices work by heating a liquid to produce an aerosol that a person inhales into their lungs producing a mist (vape). The liquid in ENDS can contain: nicotine, tetrahydrocannabinol (THC), cannabidiol (CBD) oils, propylene glycol and glycerol.

Are ENDS a safer alternative than cigarette smoking in pregnancy?

ENDS products came on the market in the U.S. in 2007, and their popularity quickly grew. One of the reasons they grew in popularity was due to the belief that they were a safer alternative to cigarettes, and could help smokers quit or reduce the amount of cigarettes they smoke. Cigarettes contain nicotine and many other agents as well as carbon monoxide. Cigarette smoking during pregnancy has been associated with an increased chance of miscarriage, cleft lip or palate, premature birth (before 37 weeks) and SIDS (sudden infant death syndrome). Smoking has also been associated with an increase chance of infertility, ectopic pregnancy (a pregnancy that occurs outside of the uterus) and complications with the placenta (i.e., placental abruption and placenta previa). The issues with cigarette smoking are not only limited to pregnancy but continue after the birth of the child as well. Smoking has been associated with a higher chance for asthma, childhood obesity and behavioral problems.

While pregnancy is a big motivation for women to quit smoking, many struggle and look for a solution during pregnancy. Complicating the issue is the fact that many nicotine replacement therapies have not been well studied, and their effectiveness in helping smokers to quit has been questioned. Therefore, there is a hesitancy to use them. Also, medications to help stop smoking, like bupropion (Wellbutrin) and varenicline (Chantix), while not considered to pose a significant chance of birth defects, have limited data regarding their use in pregnancy. Recently the Food and Drug Administration (FDA) added warnings to the label regarding an increased chance of psychiatric effects including suicidal thoughts. This does not mean these medications should not be used by pregnant women who medically need them, but it shows how complex the issue of choosing an appropriate medication can be when you need to weigh the

risks versus benefits. This leads pregnant women to find an alternative that might solve their problem and for some, ENDS seemed like the solution when they came on the market.

The effects of inhaling the substances contained in ENDS are not known, especially when it comes to pregnancy. One study has shown that users of e-cigarettes can obtain a substantial amount of nicotine from e-cigarettes that is comparable to regular cigarettes, and we do know that nicotine can cross the placenta. Animal data shows that exposure to the chemicals found in e-cigarettes can cause various effects on offspring that include impact to the immune system, lung and heart function, and neuro-development (related to the function of brains and nerves); unfortunately, so far there is no data to suggest what the impact in human pregnancy might be. In addition, while ENDS products may reduce exposure to many of the toxins in cigarettes, there is still exposure to nicotine and other toxic chemicals, which can pose an increased chance of harm to pregnancies. Also, some ENDS products that have stated they were free of nicotine have been tested and were actually found to contain nicotine.

There is no evidence to support ENDS as an effective way to stop smoking.

A recent review of the use of ENDS products among non-pregnant patients found no strong evidence that they help in the effort to quit smoking. Regardless of the lung injuries that are currently in the news, health experts recommend that pregnant women avoid all ENDS use. Instead, any pregnant woman who is struggling to quit smoking should talk with their health care provider to discuss a plan that is suitable to them and contact resources such as the National Quitline Network (1-800-QUIT NOW). Quitting is best for you and your child so go ahead and clear the air. Trust me; your baby will thank you.

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