

Connecting the Dots Between Preeclampsia and Subsequent Chronic Kidney Disease

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INTRODUCTION

Preeclampsia is a syndrome characterized by hypertension, proteinuria, and kidney dysfunction which develops during pregnancy (Kristensen et al. 2019). It is a leading cause of maternal and perinatal deaths, affecting between 2-8% worldwide (Poon et al. 2019). Although preeclampsia typically resolves shortly after delivery, it can have a significant impact on affected women's health long term, particularly in relation to a resultant decline in kidney function.

OBJECTIVE

Determine if women who have experienced preeclampsia during pregnancy have an increased risk of developing chronic kidney disease (CKD) later in life.

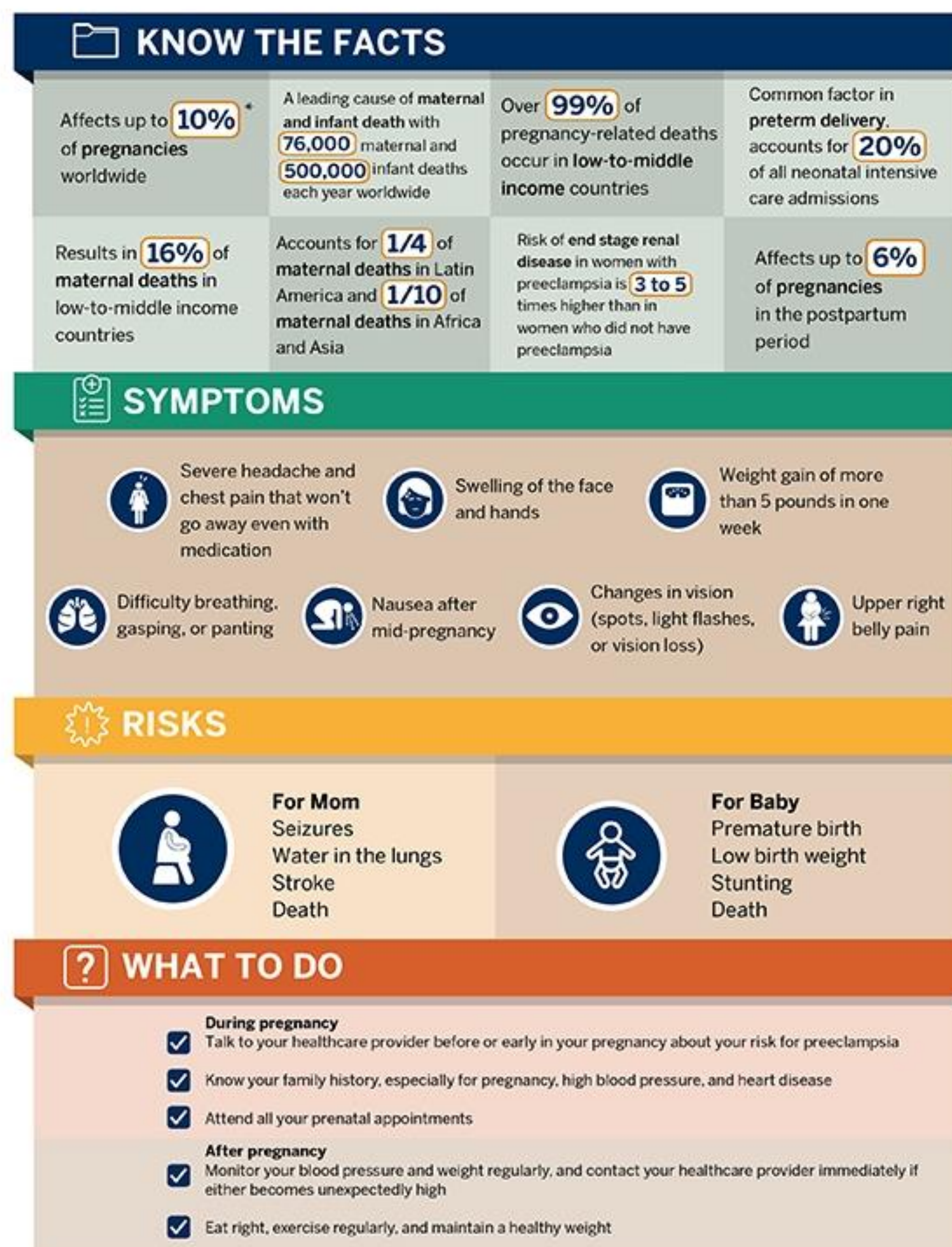
METHODS

A literature review was conducted on related topics including signs and symptoms of preeclampsia, the causal mechanism of preeclampsia, effects of hypertension on kidneys, effects of proteinuria on kidneys, morphological changes that occur during pregnancy, signs and symptoms of chronic kidney disease, the causes of chronic kidney disease, and case studies conducted on women who experienced preeclamptic pregnancies.



Be Prepared for Preeclampsia

Preeclampsia is a serious disease related to high blood pressure that can strike out of the blue – "eclampsia" is the Greek word for lightning. Eclampsia can happen to any pregnant woman during the second half of her pregnancy, or up to six weeks after delivery. Diagnosing preeclampsia early is important for both mothers and their babies. If you're pregnant and experience symptoms or just don't feel right, contact your healthcare provider right away.



REFERENCES

Kristensen JH, Basit S, Wohlfahrt J, Damholt MB, Boyd HA. 2019. Pre-eclampsia and risk of later kidney disease: nationwide cohort study. *BMJ*. 365:11516.

Poon LC, Shennan A, Hyett JA, Kapur A, Hader E, Divakar H, McAuliffe F, da Silver Costa F, von Dadelszen P, McIntyre HD, Kihara AB, Di Renzo GC, Romera R, D'Alton M, Berhella V, Nicolaides KH, Hod M. 2019. The International Federation of Gynecology and Obstetrics (FIGO) initiative on pre-eclampsia: A pragmatic guide for first-trimester screening and prevention. *Int J Gynecol Obstet*. 145(1): 1-33.

Image: <http://www.endingeclampsia.org/world-preeclampsia-day/>

RESULTS / FUTURE DIRECTION

- Studies conducted in Denmark from 1976 until 2015 followed over 1,000,000 women who experienced at least one pregnancy lasting 20 weeks. The women who experienced preeclamptic pregnancies had higher incidences (with rates ranging from 3.7 to 15.5 per 100,000 women) of chronic kidney disease later in life.
- Hypertension is the 2nd leading cause of chronic kidney disease in the United States. The National Institutes of Health estimates that hypertension is the leading cause of kidney dysfunction in 26% of the 37 million individuals with CKD.
- Women with preeclampsia may continue to exhibit some symptoms after delivery, specifically proteinuria. The continuation of this symptom further perpetuates damage and dysfunction to the kidneys in a vicious cycle.
- Women who experience preeclamptic pregnancies should be educated on the potential risk for developing chronic kidney disease later in life. Additionally, they should be monitored for a period of at least one year following delivery to ensure kidney function returns to and remains normal.