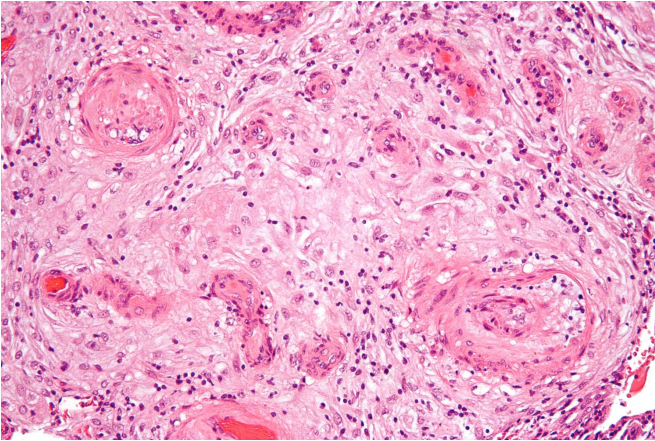# Simple test predicts dangerous pregnancy disorder

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High magnification micrograph of hypertrophic decidual vasculopathy, as seen in pregnancy-induced hypertension. Credit: Wikipedia

Edith Cowan University researchers have developed a simple, low-cost way to predict preeclampsia, a potentially deadly condition that affects pregnant women.

Preeclampsia is one of the leading causes of maternal-fetal mortality worldwide, responsible for the death of 76,000 mothers and 500,000 babies each year, primarily in the developing world.

It can cause devastating complications for women and babies, including brain and liver injury in mothers and premature birth.

Survey gives early warning

ECU researchers assessed the health status of 593 pregnant Ghanaian women using the Suboptimal Health Questionnaire.

The Suboptimal Health Questionnaire was developed in 2009 by Professor Wei Wang from ECU's School of Health and Medical Sciences.

Combining scores for fatigue, heart health, digestion, immunity and mental health, the questionnaire provides an overall 'suboptimal health score' that can help predict chronic diseases.

Professor Wang's Ph.D. candidate Enoch Anto found that 61 percent of women who scored high on the questionnaire went on to develop preeclampsia, compared with just 17 percent of women who scored low.

When these results were combined with blood tests that measured women's calcium and magnesium levels, the researchers were able to accurately predict the development of preeclampsia in almost 80 percent of cases.

Mr Anto said preeclampsia was very treatable once identified, so providing an early warning could save thousands of lives.

"In developing nations, preeclampsia is a leading cause of death for both mothers and babies. In Ghana, it's responsible for 18 percent of maternal deaths," Mr Anto said.

"But it can be treated using medication that lowers blood pressure once diagnosed.

"Both blood tests for magnesium and calcium and the Suboptimal Health Questionnaire are inexpensive, making this ideally suited to the developing world where preeclampsia causes the most suffering."

"Integration of suboptimal health status evaluation as a criterion for prediction of preeclampsia is strongly recommended for healthcare management in pregnancy: a prospective cohort study in a Ghanaian population" was recently published in the *EPMA Journal.*

  More information: Enoch Odame Anto et al. Integration of suboptimal health status evaluation

as a criterion for prediction of preeclampsia is strongly recommended for healthcare management in pregnancy: a prospective cohort study in a Ghanaian population, *EPMA Journal* (2019).