

MEDICAL BREAKTHROUGHS **RESEARCH SUMMARY**

TOPIC: PREDICTING PREEMIES: BUILDING HEALTHIER BABIES
REPORT: MB #4664

BACKGROUND: When a baby is born more than three weeks earlier than the predicted due date, that baby is called "premature." Premature babies (preemies) have not grown and developed as much as they should have before birth. Most of the time, doctors don't know why babies are born early. When they do know, it's often because a mother has a health problem during pregnancy, such as diabetes, hypertension, heart or kidney problems, and an infection of the amniotic membranes or vaginal or urinary tracts. Other reasons why a baby may be born early include bleeding, often due to a low-lying placenta or a placenta that separates from the womb, having a womb that isn't shaped normally, carrying more than one baby, being underweight before pregnancy or not gaining enough weight during pregnancy, or mothers who smoke, use drugs, or drink alcohol while pregnant.
(Source: <https://kidshealth.org/en/parents/preemies.html>)

TREATMENT: Predicting a premature baby could help doctors execute treatment options that may delay delivery. Mira Moufarrej, a Bioengineering PhD Student at Stanford University said, "They use ultrasound to estimate in the first trimester how long the baby is. And they know that in the first trimester the relationship between the length of the baby now and due date is a linear relationship. Now if you measure the baby in the second trimester or the third trimester, that's not necessarily the case because at that point differences in humans come into play." Moufarrej says there are a few treatments, but they do not work well. "You can do progesterone injections during pregnancy. And then if a woman has a short cervix then you can do a cervical cerclage. But there's a narrow group of women that fit that scope and who deliver preterm, and they haven't been shown to be that effective."
(Source: Mira Moufarrej)

NEW TESTS: Moufarrej talked about the blood tests, "So we developed two blood tests. The first one predicts gestational age similar to ultrasound, so when a baby will be due, but it does it in the second and the third trimester as opposed to the first. So, for women who live far away from the clinic or women who don't know they're pregnant until later in life, this serves as a complement and a substitute whereas in the past there was no substitute to ultrasound." The test had so far shown 80 percent accuracy.
(Source: Mira Moufarrej)

FOR MORE INFORMATION ON THIS REPORT, PLEASE CONTACT:

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If this story or any other Ivanhoe story has impacted your life or prompted you or someone you know to seek or change treatments, please let us know by contacting Marjorie Bekaert Thomas at mthomas@ivanhoe.com