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Vitamin D deficiency associated with greater rates of cesarean sections

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Researchers from Boston University School of Medicine (BUSM) and Boston Medical Center (BMC) found that pregnant women who are vitamin D deficient are also at an increased risk for delivering a baby by caesarean section as compared to pregnant women who are not vitamin D deficient. These findings currently appear on-line in the *Journal of Clinical Endocrinology & Metabolism*.

At the turn of the 20th century, women commonly died in childbirth due to "rachitic pelvis" rickets of the pelvis. While rickets virtually disappeared with the discovery of vitamin D, recent reports suggest that vitamin D deficiency is widespread in industrialized nations.

Over a two-year period, the researchers analyzed the relationship between maternal serum 25-hydroxyvitamin D [25(OH)D] and the prevalence of primary caesarean section. In total, 253 women were enrolled in this study, of whom 43 (17 percent) had a caesarean section. The researchers found that 28 percent of women with serum 25(OH)D less than 37.5 nmol/L had a caesarean section, compared to only 14 percent of women with 25(OH)D greater than 37.5 nmol/L.

"In our analysis, pregnant women who were vitamin D deficient at the time of delivery had almost four times the odds of caesarean birth than women who were not deficient," said senior author Michael Holick, MD, PhD, director of the General Clinical Research Center and professor of medicine, physiology and biophysics at BUSM and Anne Merewood assistant professor of pediatrics at BUSM and lead author of the study.

According to Holick, one explanation for the findings is that vitamin D deficiency has been associated with proximal muscle weakness as well as suboptimal muscle performance and strength.

Source: Boston University