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Researchers from Norway found that women with a pre-pregnancy body mass index (BMI) of 40 had an increased risk of vacuum extraction delivery or Cesarean section (C-section). Findings that appear in *Acta Obstetricia et Gynecologica Scandinavica*, a journal published by Wiley on behalf of the Nordic Federation of Societies of Obstetrics and Gynecology, indicate that women with more than a 16 kg (30 lbs) weight gain during pregnancy increased their risk of forceps or vacuum extraction, and C-section.

Obesity is a global health crisis, with the World Health Organization (WHO) reporting that 1.4 billion adults were overweight (BMI of 25-29.9) in 2008 and more than half a billion would be

considered obese (BMI of 30 or more). Roughly one-third of U.S. adults were considered obese in 2009-2010, according to the Centers for Disease Control and Prevention (CDC). In Norway previous studies estimate that obesity prevalence among women of reproductive age has increased two- to three-fold in the last generation.

"Our study examines pre-pregnancy BMI and gestational weight gain on the mothers' risk of operative delivery," said Dr. Nils-Halvdan Morken from the University of Bergen in Norway and lead author of the present study. "With such alarming rates of obesity

understanding its impact is an important health issue, particularly for women in child-bearing years."

The research team used data taken from participants of the Norwegian Mother and Child Cohort Study (MoBa)—a prospective, population-based group of women giving birth in Norway between 1999 and 2008. The MoBa study, conducted by the Norwegian Institute of Public Health, now includes a cohort of 108,000 children, 90,700 mothers, and 71,500 fathers. A sample of 50,416 women who gave birth to one child were included in the study and those

experiencing preeclampsia, hypertension, diabetes, gestational diabetes or placenta previa were excluded.

Results show that overweight and obese women before pregnancy were at increased risk of C-section. Women with a pre-pregnancy BMI of 40 or more had the strongest risk of C-section and increased risk of vacuum extraction delivery. Researchers also found that women who gained 16 kg or more while pregnant significantly increased the risk of forceps, vacuum extraction and C-section—a finding that was independent of BMI prior to

pregnancy. Obese women had significantly lower gestational weight gain, but their babies tended to be larger.

Dr. Morken concludes, “Obesity and weight gain above 16 kg during pregnancy are independent risk factors for vacuum extraction delivery and need for C-section. While other factors may contribute to operative delivery and further investigation of gestational weight gain is warranted, it is important obstetricians be aware of the impact of a high BMI on pregnancy and delivery to properly advise women considering motherhood.”