

Opioid prescription increase in pregnancy

Research in the US has found that more than 14% of pregnant women are prescribed opioids for pain relief

US

The number of pregnant women being prescribed opioids for pain relief has been steadily rising. Now more than 14% of women in the US are taking this kind of medication during pregnancy. This has led to some scientists to call for more research into the risk of opioids on the child.

Prescriptions for opioids has increased almost threefold (1991 to 2009) among all Americans according to National Institutes of Health, with opioid use higher among women in the US than in Europe. Research led by Brian Bateman, assistant professor at Harvard Medical School looked at data from more than 530 000 pregnant women (from an insurance plan) who gave birth between 2005 and 2011. The researchers found that 76 742 were prescribed opioids at some point during their pregnancy (14.4%).

The most common reason for the prescription of this medication was for back pain (37%) with other conditions leading to the medication including abdominal pain, migraine, joint pain and fibromyalgia. Of the opioids the most frequently prescribed was hydrocodone (6.8%), codeine (6.1%) and oxycodone (2%).

Other scientists commenting on the study pointed to the need for further research to determine the risk to the foetus of short-term exposure to this type of medication as previous research has had contradictory findings.

Bateman BT, Hernandez-Diaz S, Rathmell JP, Seeger JD, Doherty M, Fischer MA, Huybrechts KF (2014) Patterns of opioid utilization in pregnancy in a large cohort of commercial insurance beneficiaries in the United States. *Anesthesiology* 120(5): 1216–24

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CANADA

Heatwaves can lead to early-term delivery according to new research from Canada. The study from the University of Montreal found that when temperatures reach 32°C or above, for a period of between 4 and 7 days, the risk of early-term delivery (37–38 weeks gestation) is 27% higher than on normal summer days.

Nathalie Auger from the Department of Social and Preventive Medicine, University of Montreal, Canada led the study which looked at data on 300 000 births in Montreal between 1981 and 2010. The temperature measurements were from Environment Canada. The research found that the temperature had a particular impact on the 37–38 week gestational period, rather than earlier, preterm (less than 37 weeks). Auger found that nearly 20 000 deliveries occurred in the week following a day when the temperature reached 32°C or higher.

'We observed only a negligible increase in the rate of preterm births between days when the temperature was below 20°C and those when it was above 28°C, from 5.4% to 5.8%', said Auger. But in women who reached 37 or 38 weeks of pregnancy, the risk of early-term delivery increased by 17% following a 3-day episode of 32°C or more, compared to days without a heat wave. The risk reached 27% when the extreme heat episode lasted from four to seven days. This findings were after adjusting for variables such as the mother's age, birth order, and humidity during heat waves.

Auger added: 'Small-scale studies suggest that heat-induced stress increases uterine contractility, during a period of pregnancy when thermoregulation seems less effective. We also suspect that dehydration resulting from high ambient temperature reduces the blood supply to the uterus, increasing the release of pituitary hormones that induce labour.'

Auger N, Naimi AI, Smargiassi A; Lo E, Kosatsky T (2014) Extreme heat and risk of early delivery among preterm and term pregnancies *Epidemiology* 25(3): 344–50

DENMARK

Paracetamol has been found to be associated with a higher risk of attention deficit disorders in children when taken by their mothers during pregnancy.

The researchers used the Danish National Birth Cohort, a nationwide study of pregnancies and children, to examine pregnancy complications and diseases in children looking at factors operating in early life. They studied 64 322 children and mothers enrolled in the Danish cohort from 1996 to 2002. Paracetamol use during pregnancy was determined using computer-assisted telephone interviews that were conducted up to three times during pregnancy and again 6 months after birth.

The researchers followed up with parents when their children reached the age of 7. They asked about any behavioural problems in their children using the Strength and Difficulties Questionnaire. In addition, they obtained diagnoses of hyperkinetic disorder among the cohort's children (at an average age of 11) from the Danish National Hospital Registry or the Danish Psychiatric Central Registry. Finally, they identified if ADHD medications, mainly Ritalin, were redeemed for the children using the Danish pharmaceutical prescription database.

More than half of all the mothers reported using paracetamol while pregnant. Children whose mothers used paracetamol during pregnancy were 13 to 37% more likely to receive a hospital diagnosis of hyperkinetic disorder, being treated for ADHD, or having ADHD-like behaviours at age 7. The longer paracetamol was taken the stronger the associations. The risks for hyperkinetic disorder/ADHD in children were elevated 50% or more when the mothers used the common pain-killer for more than 20 weeks in pregnancy.

Liew Z, Ritz B, Rebordosa C, Lee PC, Olsen J (2014) Acetaminophen use during pregnancy, behavioural problems, and hyperkinetic disorders. *JAMA Pediatr* 168(4): 313–20

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