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## Research shows general anaesthesia for caesarean deliveries increases risks for newborns

Results of an Australian study<sup>1</sup> published today in the open access journal *BMC Medicine* show that the use of general anaesthesia (GA) for caesarean section is associated with an increased risk of infant intubation and low APGAR<sup>2</sup> scores relative to regional anaesthesia<sup>3</sup>.

The study, led by Charles Algert from the Kolling Institute of Medical Research at Royal North Shore Hospital, analysed 50,806 caesarean deliveries in New South Wales between 1998 and 2004 with the results strongly supporting the guidelines that regional anaesthesia is to be preferred over GA for most caesarean sections.

“We have shown that general anaesthesia poses significant risks to neonates of both resuscitation requiring intubation and of a poor APGAR score at 5 minutes,” Algert said. “For all of the caesarean indications and across all hospital levels, the results favoured regional block over GA”

Although current guidelines recommend regional blocks, GA was still used for 12.6% of caesareans across NSW in 2006. It is also generally presumed that any harm caused by GA is short-lasting with previous studies focusing on resuscitation and APGAR score at one minute.

However, according to Algert this may not be the case. “The increased rates of neonatal intubation after GA shown in this study represent harm in and of itself and the persistence of low 5-minute Apgar scores suggest that deleterious effects may last longer than the immediate aftermath of delivery”.

The authors conclude that women and their doctors “considering the use of GA for a caesarean delivery should be aware of these possible consequences for the infant for both planned and emergency caesarean sections”.

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<sup>1</sup>*Regional block versus general anaesthesia for caesarean section and neonatal outcomes: a population based study. Charles S Alger<sup>a</sup>, Jennifer R Bowen<sup>b</sup>, Warwick B Giles<sup>c</sup>, Greg E Knoblanche<sup>d</sup>, Samantha L Lair<sup>e</sup>, Christine L Roberts<sup>a</sup> Kolling Institute of Medical Research – Clinical & Perinatal Population Health Research<sup>a</sup>, Departments of Neonatology<sup>b</sup>, Obstetrics & Gynaecology<sup>c</sup>, Anaesthetics<sup>d</sup> – Royal North Shore Hospital. BMC Medicine April 28 2009*

<sup>2</sup>*APGAR score: Ranges from zero to ten. A method of quickly evaluating a newborn's physical condition after delivery to determine any immediate need for extra medical or emergency care. Babies are usually assessed twice: giving an APGAR score at 1 minute after birth and again at 5 minutes after birth.*

<sup>3</sup>*Regional blocks include epidural and/or spinal anaesthesia*