

Allergic oesophagitis is linked to C-section and early antibiotic use

Infants delivered by caesarean section and those given early antibiotics appear more prone to developing allergic inflammation of the oesophagus, according to a study by investigators from the Johns Hopkins Children's Center and Harvard Medical School.

The findings, published online in the *Journal of Allergy and Clinical Immunology: In Practice*¹, reveal that these two factors may somehow precipitate disease development by altering the gut bacterial community, the microbiome. The precise mechanism is unknown, but the researchers speculate that the early development and composition of gut bacteria can influence immunity for life. Babies born via vaginal delivery are exposed to maternal bacteria that colonise the newborn infant's gut – children born via caesarean section miss out on this vital initial exposure. During the first year of life, an infant encounters various microorganisms and the gut microbiome changes in response to this. Antibiotics during this critical period may alter gut immunity by wiping out the 'healthy' bacteria along with disease-causing bacteria, which may lead to an imbalance in the gut.

Reference

1. **Radano M.C. et al.** Caesarean section and antibiotic use found to be associated with eosinophilic esophagitis *J Allergy Clin Immunol: In Practice* doi: 10.1016/j.jaip.2014.02.018.

Risk of brain injury is genetic

According to a study published in *Pediatrics*¹, a premature infant's risk of brain injury is influenced by its genes.

Researchers at the University of Edinburgh, Imperial College London and King's College London have identified a link between injury to the developing brain and common variation in two genes known as *ARVCF* and *FADS2*. The researchers studied genetic samples and MRI scans from 83 premature infants at the time of discharge from hospital.

The study builds on previous research, which has shown that premature birth (<37 weeks) can be a cause of learning and behavioural difficulties in childhood. The findings may help to uncover mechanisms that lead to brain injury and ultimately new neuroprotective treatment strategies for preterm babies.

Reference

1. **Boardman J.P. et al.** Common genetic variants and risk of brain injury after preterm birth. *Pediatrics* 2014;133:e1655-63.

Gaps in UK maternal mental health services revealed

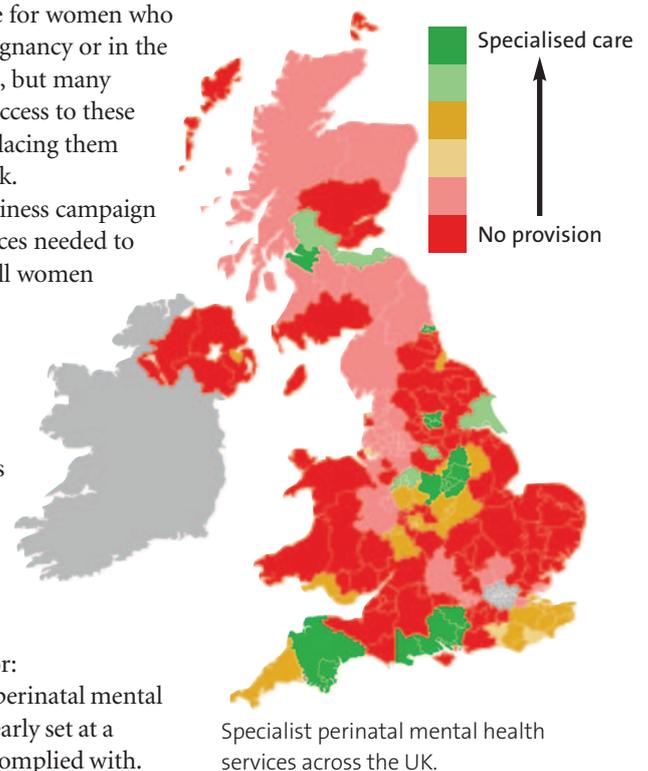
The Maternal Mental Health Alliance – a coalition of over 60 UK professional and patient-led organisations – has published a series of maps highlighting the gaps in specialist perinatal mental health services across the UK, to mark the launch of the Everyone's Business campaign.

Perinatal mental health services provide specialist care for women who become ill during pregnancy or in the year after giving birth, but many women do not have access to these services, potentially placing them and their babies at risk.

The Everyone's Business campaign is calling for the services needed to improve the lives of all women throughout the UK who experience perinatal mental health problems, and will provide key information and tools to support commissioners and service providers to make the necessary improvements. The campaign is calling for:

- Accountability for perinatal mental health care to be clearly set at a national level and complied with.

- Community specialist perinatal mental health services meeting national quality standards for women in every area of the UK.
- Training in perinatal mental health, delivered to all professionals involved in the care of women during pregnancy and the first year after birth.



Studies examine effect of gravity on placental transfusion

Changing the way a baby is held before its umbilical cord is clamped could improve the take-up of delayed cord clamping.

Studies have shown that delaying clamping of the umbilical cord until two minutes after birth improves the volume of placental transfusion and reduces the risk of iron deficiency in an infant. However, holding the infant for more than one minute at the level of the placenta (the introitus position), as is currently recommended on the assumption that gravity affects the volume of placental transfusion, is cumbersome, might result in low compliance and interferes with immediate contact between the mother and her infant.

The authors of a study published in *The Lancet*¹ compared the efficiency of the introitus position with an alternative, more comfortable position – placing the infant on the mother's abdomen. They found that the position of the infant before cord clamping does not affect the volume of blood that passes from the placenta to the baby, but has the advantage of being less awkward. A change in practice might increase obstetric compliance with delayed cord clamping, enhance maternal-infant bonding and decrease iron deficiency in infancy.

Reference

1. **Vain N.E. et al.** Effect of gravity on volume of placental transfusion: a multicentre, randomised, non-inferiority trial. *Lancet* 2014 doi:10.1016/S0140-6736(14)60197-5.