

# Hot topics from the web

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**Neonatal-talk** ([www.infantgrapevine.co.uk](http://www.infantgrapevine.co.uk)) and **NICU NET** ([www.neonatology.org/nicu-net/join.html](http://www.neonatology.org/nicu-net/join.html)) are two of the many discussion forums for medical and nursing staff caring for sick infants and children. They are very busy sites and this is a synopsis of just some of the recent threads. Although not necessarily evidence-based, these discussions will hopefully promote further debate.



## Use of sucrose and human milk for pain relief and comfort

### NICU NET and neonatal-talk

This is a frequent topic on both sites.

Sucrose use for pain relief two minutes prior to painful procedures such as heel-sticks is becoming very popular and seems to be used for ventilated infants, those that are only 24-28 weeks' gestation and even if they are 'nil by mouth'. Responding units have found no increase in cases of necrotising enterocolitis or chronic lung disease in those babies receiving sucrose. The usual solution is 24% and is dripped on the anterior tongue with an oral syringe, followed by a pacifier to promote sucking. A gloved finger is used for breastfed infants or a cotton bud for very small infants. Amount given is 0.1 to 0.5mL for term sized infants, with 0.05mL having definite results in very small infants. The total maximum daily dose appears to be 5mL (or 2.5mL for infants less than 1500g). Human milk is used to comfort 'fussy' infants who are 'nil by mouth', as sucrose is inappropriate and may even become addictive in these cases. One responder said she used 0.1mL breast milk in the mouth whilst tube feeding for taste/smell. Even a few drops of colostrum on the tongue or lips can be used to moisten the infant's mouth while on the ventilator.

## Routine suctioning at delivery

### NICU NET

A question was posed asking other units if it was their practice to routinely suction the nares at delivery to rule out the diagnosis of choanal atresia. In general it was thought that this practice could cause trauma, vagal stimulation, and low oxygen saturation levels, and suction should only be applied if the infant clinically required it. Patency should be established by occluding each

nares in turn and listening for the passage of air in the other. If no air passage is heard, a small bore catheter should be passed. And as one person pointed out, infants with choanal atresia go blue when crying, whereas healthy babies do not.

According to American Academy of Paediatrics guidelines in neonatal resuscitation, suction of the mouth and then both nares should be done after delivery of every baby. However, in the UK The Resuscitation Council specifically suggest that routine suctioning is potentially harmful. Another responder added that any baby that is not breathing/crying is assisted by neutral positioning, jaw thrust, chin lift etc. followed if necessary by bag and mask ventilation. Suctioning should only be done under direct vision. She added that failure to inflate the lungs is almost always positional rather than due to obstruction, and that healthy babies clear their own liquor adequately.

## Hypothermia for hypoxic ischaemic encephalopathy (HIE)

### NICU NET

As there is increased evidence that hypothermia can benefit infants with HIE with apparently few adverse effects, a neonatologist from New Zealand wondered what other units were doing, whether there had been any clinical trials, and also how 'cooling' was achieved – i.e. would 'not actively warming' suffice? He suggests allowing the infant's temperature to drop to around 34.5°C, with appropriate monitoring, followed by careful re-warming.

Although, previously, head cooling had been used, one reply cited an article<sup>1</sup> which recommended whole body hypothermia. An accompanying editorial cautioned that this treatment should be experimental until more data are collected. So, is whole-body

cooling better than selective head cooling with a Cool-cap®? It was suggested that the time it takes to cool is probably critical – available literature recommends cooling within six hours and this is probably achieved more easily with whole-body cooling. It is not documented for how long cooling is necessary or what the optimal temperature is. However, trials appear to show some significant short term benefits of hypothermia in asphyxiated babies, whilst long term outcome remains to be investigated.

1. **Shrankan, S. et al.** Whole-body hypothermia for neonates with hypoxic ischaemic encephalopathy. *N England Journal of Medicine* 2005; **353**(15): 1574-84 and 1619-20.

## Transporting premature infants

### NICU NET

One unit which had recently adopted the practice of transporting and admitting tiny babies once dried, and with a hat *in situ*, in a plastic bag, queried what others were doing. The staff found the bag cumbersome as it was so big and wondered if it should not be sterile. However, they had had excellent results with a 25-week gestation arriving on the neonatal unit with a normal axillary temperature.

A unit in Switzerland used sterile plastic bags for all babies under 1250g who were not dried before placement. They remained in the bag for 48 hours at least, and sometimes the bag was cut open and used as a wrap within the incubator. A further unit used heat pads under the plastic bag during insertion of lines.

In some places Aquaphor ointment is used to prevent transepidermal water loss, and thus encourage warming. It is applied as soon as possible after birth to all areas including the scalp. It is renewed as needed to keep skin covered for 1-2 weeks.