

In 1989 Mr Barry Richardson, a materials consultant, said that his research showed antimony added to mattress PVC released a toxic gas which, he said, caused cot death. In 1990 the Department of Health and FSID commissioned studies to investigate the claim but neither found any evidence to support it. In 1994 The Cook Report broadcast unpublished findings that cot death babies had higher antimony levels in their blood and liver than babies who died of other causes and asserted that the antimony came from cot mattresses. Further extensive research was commissioned and reported in 1998 in the final report of Chief Medical Officer's Expert Group to Investigate Cot Death Theories: Toxic Gas Hypothesis. Here are some of the facts this and other scientific research has established:

1. There is no difference in antimony concentrations in cot death babies and other babies.
2. Antimony is found in most babies and was reported in scientific literature before the chemicals were present in mattress PVC. Antimony is found in babies even before birth – i.e. before they could have had any exposure to mattresses. It could come from maternal diet, but antimony is everywhere in the environment, including common household dust.
3. Antimony was not added to mattresses in the UK before 1988 and yet cot deaths were occurring at the rate of about 2,000 per year well before then. There are currently just under 350 cot deaths per year. The year after antimony was first added to mattresses, 1989, was the year that cot deaths began to decrease.
4. The claim that the decrease was due to publicising the advice to wrap mattresses is unfounded. In the CESDI study (Confidential Enquiry into Stillbirths and Deaths in Infancy), the UK's largest study into cot death, only 2% of mattresses in the UK were found to be wrapped, and the study found that babies had actually died on wrapped mattresses. The claim by Cot Life 2000 that this is because the mattresses were wrapped incorrectly is unsubstantiated. As CESDI is a confidential enquiry with the data being completely anonymous, it is not possible for anyone to know whether the wrapping was "incorrect".
5. Cot death occurs in countries where no antimony has ever been added to mattresses.
6. When comparing babies who die with those who live, proportionately more of the babies who lived slept on PVC mattresses. This may be because it is easier to keep such mattresses clean. A Scottish study found that previously-used cloth or "ventilated" mattresses (which are more difficult to keep clean) are associated with an increased risk of cot death. However, the same study found that used mattresses with a full integral PVC covering were not associated with an increased risk of cot death.
7. Several research groups have replicated Mr Richardson's original experiment but their findings do not substantiate his conclusions, even though Mr Richardson co-operated fully with one of the attempts and agreed that the same methodology had been followed. In other words, in normal cot-like conditions it is not possible to generate toxic gas from antimony encapsulated in mattress PVC.

FSID continues to encourage parents to follow the evidence-based advice to Reduce the Risk of cot death:

- Cut smoking in pregnancy – fathers too! And don't let anyone smoke in the same room as your baby.
- Place your baby on the back to sleep (and not on the front or side).
- Do not let your baby get too hot, and keep your baby's head uncovered.

- Place your baby with their feet to the foot of the cot, to prevent them wriggling down under the covers, or use a baby sleep bag.
- Never sleep with your baby on a sofa or armchair.
- The safest place for your baby to sleep is in a crib or cot in a room with you for the first six months.
- It's especially dangerous for your baby to sleep in your bed

if you (or your partner):

- are a smoker, even if you never smoke in bed or at home
- have been drinking alcohol
- take medication or drugs that make you drowsy
- feel very tired;

or if your baby:

- was born before 37 weeks
 - weighed less than 2.5kg or 5½ lbs at birth
- Don't forget, accidents can happen: you might roll over in your sleep and suffocate your baby; or your baby could get caught between the wall and the bed, or could roll out of an adult bed and be injured.
 - Settling your baby to sleep (day and night) with a dummy can reduce the risk of cot death, even if the dummy falls out while your baby is asleep.
 - Breastfeed your baby. Establish breastfeeding before starting to use a dummy.
 - Keep your baby's head uncovered - place your baby with feet to the foot of the cot to prevent wriggling down under the covers
 - If your baby is unwell, seek medical advice promptly

More detailed information about the Reduce the Risk advice can be found at: <http://www.fsid.org.uk/reduce-risk.html>

Free supplies of the Department of Health/FSID Reduce the Risk leaflet are available by writing to: DOH, PO Box 777, London, SE1 6XH or phoning 0300 123 1002.