

Richardson BA. Sudden infant death syndrome: a possible primary cause. J Forensic Sci Soc. 1994 Jul-Sep;34(3):199-204. Erratum in: J Forensic Sci Soc 1994 Oct-Dec;34(4):284.

Penarth Research International Limited, St Peter Port, Guernsey, Channel Islands.

The hypothesis that poisoning by phosphines, arsines and stibines might be the primary cause of sudden infant death syndrome (SIDS) was investigated. Most mattress materials contain phosphorus or antimony compounds as fire retardant additives. Mattress materials in areas affected by the warmth and perspiration of the sleeping infant were found to be naturally infected by the fungus *Scopulariopsis brevicaulis* which is thought to be capable of generating phosphines, arsines and stibines from materials containing phosphorus, arsenic or antimony compounds. These gases may cause anticholinesterase poisoning and cardiac failure in infants, but contributory factors include the prone sleeping position and overwrapping. In England and Wales, the progressive increase in SIDS between 1951 and 1988 seems to be related to increasing use of phosphorus and antimony compounds as fire retardants in cot mattresses.

MeSH Terms:

Air Pollutants, Environmental/poisoning
Antimony/poisoning
Arsenic Poisoning
Arsenicals*
Beds/adverse effects*
Cause of Death
Fever/complications
Flame Retardants/poisoning*
Humans
Infant
Infant Equipment
Infant, Newborn
Mitosporic Fungi/isolation & purification
Mitosporic Fungi/physiology
Phosphines/poisoning

Polyvinyl Chloride/poisoning
Prone Position
Research Support, Non-U.S. Gov't
Sudden Infant Death/etiology*

Substances:

Air Pollutants, Environmental
Arsenicals
Flame Retardants
Phosphines
Antimony
arsine
stibine
Polyvinyl Chloride

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