

# International Media Release

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## Unraveling the mystery of Sudden Infant Death Syndrome

After some forty five years of extensive research, the cause of death classified as Sudden Infant Death Syndrome (SIDS), has baffled science. It is arguably the deepest mystery in medical science. Now, an Australian mathematician believes he has stumbled onto unlocking the mystery behind SIDS, while studying memory and dreams in neural network models.

SIDS is the second largest killer of infants in the first year of life, outside of congenital anomalies (existing at birth), and accounts for some five thousand deaths each year in the United States alone, and possibly one hundred thousand worldwide. SIDS is so poorly understood that it is only diagnosed after every other cause of death is excluded following an extensive autopsy and examination of the death scene. Most infants who succumb to SIDS are usually in good health prior to death. To put it quite bluntly the first and only symptom of SIDS is death. "This is quite extraordinary given we have made such major advances in other medical diseases like cancers", say Dr Christos. "Up to now we have had no idea why so many babies are dying, and why certain preventative measures work."

Dr Christos believes that the underlying cause of SIDS is related to a baby dreaming it is back in the womb where it did not have to breathe because there the mother supplied it with oxygen through the blood. In the course of that dream, a baby may stop breathing and die, because it imagines it does not have to breathe. This astonishing theory came to Dr Christos when he was explaining to friends at a dinner party how lucid-dream researchers (who become conscious during the course of a dream) had discovered that when we dream that we are swimming underwater, we actually hold our breath. He knew we dream about our own set of memories and that a little baby, which dreams for longer than an adult, is likely to dream of being back in the womb, its memory.

"Most theories can explain only a single fact about SIDS, whereas my theory is consistent with ALL of the known facts", says Dr Christos. "And the reason we have not been able to find the medical cause of death is that it is in the mind of the infant." Dr Christos' theory explains why the risk of SIDS is so much higher if an infant is placed to sleep in the prone (face-down)

sleeping position, or if it is extensively covered during sleep. Both of these factors may remind the infant of being back in the womb. "Face down, the infant assumes a fetal position, and womb-like conditions may remind the sleeping infant of its fetal memory", he says.

Dr Christos also notes that giving a baby a pacifier (or dummy) reduces the risk of SIDS significantly. When this fact was first discovered, many researchers suggested that this was because a pacifier keeps the infant's airway passage open, but this could not explain why thumb sucking was later discovered to be a risk factor. Dr Christos suggests that a pacifier helps because it is a post-natal phenomenon whereas thumb sucking is something that a fetus normally does at seven months gestation.

Another strange finding is that sleeping an infant in the same room as adults helps to reduce the risk of SIDS, so long as the infant does not sleep in the same bed as an adult. Dr Christos says this is because sleeping in the same room reminds the infant that it has been born, but if an infant sleeps in the same bed as an adult, it may remind it of being back in the womb, because of the heartbeat of the adult the baby is sleeping with.

The fetal memory dream hypothesis, as he likes to call it, also explains why all of the chemoreceptors in our airways and lungs, which detect a fall in oxygen or an increase in carbon dioxide and should normally awake the sleeping infant, fail simultaneously. "These mechanisms are controlled by the brain. The infant does not realize there is a problem. It thinks it is a fetus, and all of the alarm bells are turned off. Other theories have to assert that a SIDS infant is extremely ill, whereas this is simply not the case", said Dr Christos.

Another key stumbling block for SIDS theories has been to explain the apparent hiatus of SIDS in the first month or two after birth. For some reason infants are protected in the first month. Dr Christos says that his theory can explain this as well, for the first time. "The apparatus in the brain which is required for dreaming, such as the connections from the thalamus to the neocortex and back, are not properly developed until one or two months after birth, so a baby does not start dreaming right away."

"There is no miracle cure or vaccine", says Dr Christos. "The only way to reduce SIDS is to make the environment of the sleeping infant as little womb-like as possible." "There are a number of new measures, other than

sleeping the baby prone and avoiding excessive bed covering, that can be taken to reduce the risk further", says Dr Christos. "One could add some white noise, like a radio playing out of tune, for example", he says.

This extraordinary theory is presented in a new book by George Christos, published recently by Rutgers University Press called Memory and Dreams: The Creative Human Mind. The book however, as its title suggests, is also about memory, dreams and creativity. Christos elaborates on how our experiences are turned into memories, thoughts, ideas and dreams, and how the brain is able to function autonomously (without any central controller). Christos posits that we dream to generate roughness in our memory space, so that we are better equip to learn, adapt and think the next day. "All of this fits in with why we, and almost all other mammals, have evolved with dream sleep - to allow us to survive in an ever-changing environment", he says. "And what is more, anything you are about to learn or think of is in a sense already represented in your head before you learn or think of it." "

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Further Details (such as book synopsis, book reviews, previous media placements, history and other work of Dr Christos) are available on Dr Christos's website: <http://www.justgeorgeous.net>