



Dr. Desaline Joseph

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Dr. Desaline Joseph is a Consultant in Paediatric Sleep Medicine and Neurodisability at Evelina London Children's Hospital, St Thomas' Hospital. She qualified in Medicine in 2000 from University of Leicester UK. She has a Doctorate in Medicine and has conducted research in circadian rhythm development in newborn infants. Her research has included home based physiological measurements in infants including estimation of melatonin, cortisol and clock genes. Mothers acted as main research assistants in the studies. Dr. Joseph held a National Institute of Health Research (NIHR), one of the UK's primary research grant funder, Academic Clinical Lecturer post at the University of Nottingham. She has experience in recruitment to national studies/trials and has authored research publications and conducted collaborative projects.

Dr. Joseph is a past recipient of the Early Stage Researcher Award by the British Sleep Society.

She is a member of the American Academy of Sleep Medicine, the Royal College of Paediatrics and Child health and is actively involved in undergraduate and postgraduate education.

She comes from a paediatric neurodisability background and is passionate about developing the field of paediatric sleep medicine within the UK. She is passionate about multidisciplinary working and feels parent/family engagement are key to infant, child and adolescent wellbeing in terms of sleep and general health outcomes in the paediatric population.

Infant sleep and infant feeding – the key is in the circadian clock

24 hour (circadian) bio rhythms are essential for life.
The rhythms in newborn infants are not intact at birth.

They develop over the first few months of life,
rendering a time critical window for development.

A delay in physiological maturation renders the infant
vulnerable and at risk from harm due to specific
morbidity and mortality.

The natural rhythms originate from an endogenous
circadian clock (supra chiasmatic nucleus or SCN).
The SCN's function is to synchronise and coordinate
key biological functions such as sleep-wake cycles,
physiological parameters, regulate hormone
production with the daily the external environment
and assemble peripheral clock genes.

Infant sleep patterns and feeding are crucially linked.
Feeding timing, regularity and feeding type all act as
entrainers of the clock as well as having an influence
on infant's physiological state.

Modifications in infant care have a role in accelerating
or delaying physiological maturity.

A fuller understanding of the ontogeny of circadian
rhythms in newborns is essential for infant health and
wellbeing.