



**Medical
Blueprints**

ANGEL EYES: CAMERAS IN THE NICU REPORT #2771

BACKGROUND: A premature baby is a baby that is born before 37 weeks of pregnancy. Each year, about 1 in 10 babies in the United States is born prematurely. These babies may not be fully developed at birth and may have more health problems and need to stay in the hospital longer than babies born later. Some premature babies spend time in a hospital's newborn intensive care unit (NICU). This is the nursery where sick newborns get medical care. They stay in the NICU until their organs develop enough to stay alive without medical support. Some babies need NICU care for weeks, and some even months. Problems like intellectual or developmental disabilities can show up as the baby grows and even later in childhood. These are problems with how the brain works that can cause a person to have trouble or delays in physical development, learning, communicating, taking care of himself, or getting along with others.

(Source: <https://www.marchofdimes.org/complications/premature-babies.aspx#>)

TECHNOLOGY AND MILESTONES: Hospitals around the country have been upgrading their NICU's to include personal webcams. It's a convenience for parents and reduces worries about people bringing in germs. Parents' peace of mind is the primary goal, and the cameras give more people the opportunity to see the babies. Research shows that parents have loved the video access which enables them to follow growth and important milestones. However, a study published in the American Journal of Perinatology found some nurses have reservations about being watched all day and all night. The American Academy of Pediatrics (AAP) lists important milestones in a child's growth, so you know what to watch for at each age. The day your baby was born is the official date of birth, but the estimated due date is also important. When you measure your baby's development, or when you look at what is "normal" for your baby's age, consider both of those dates. By looking at the difference between them, you can adjust the calendar age to account for the prematurity and calculate the corrected age. Using the corrected age during the first 2 years will give a better idea when common developmental goals might be reached.

(Source: <https://www.npr.org/sections/health-shots/2018/05/28/610953197/cameras-on-preemies-let-in-families-keep-germs-out> and <https://www.healthychildren.org/English/ages-stages/baby/preemie/Pages/Preemie-Milestones.aspx>)

BENEFITS OF CAFFEINE THERAPY: A study by University of Calgary researchers shows the earlier the dose of caffeine can be given to preemies, the better. "Caffeine is the most commonly used drug in the NICU after antibiotics," says Dr. Abhay Lodha, MD, associate professor in the departments of Pediatrics and Community Health Sciences at the Cumming School of Medicine and staff neonatologist with Alberta Health Services (AHS). It's believed that caffeine may increase the growth of dendrites, the small branches of a neuron that receive signals from other neurons. The researchers found early caffeine treatment had no long-term negative effects on neurodevelopment, was associated with better cognitive scores, and reduced odds of cerebral palsy and hearing impairment. Lodha continued, "Caffeine may also improve better lung stretch and expansion, cardiac output and blood pressure in premature infants, which improves oxygen supply throughout the body and brain."

(Source: <https://www.sciencedaily.com/releases/2018/12/181212093311.htm>)

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