

Press information

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EPIPAGE-2 Study: Outcomes for Preterm Children After 5.5 Years



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At 5.5 years of age, near-normal developmental outcomes can be expected for 35% of children born extremely preterm, for around 45% of those born very preterm, and for 55% of those born moderately preterm. Difficulties that are encountered range from severe but rare disabilities to more subtle disorders that require the mobilization of considerable medical, paramedical, and familial resources. At 5.5 years of age, a time when it becomes easier to explore the major neurodevelopmental domains, over one third of children born prematurely have so-called minor difficulties in the motor, sensory, cognitive, or behavioral domains. Their frequency of occurrence requires close monitoring of the children in structured networks in order to catch them early and take action at a time when brain plasticity is at its peak.

These are the findings of EPIPAGE-2, a study performed by researchers from the Inserm-Université de Paris Obstetrical Perinatal and Pediatric Epidemiology Research Team (EPOPé) from the Center of Research in Epidemiology and Statistics (CRESS, Unit 1153), and with the participation of teams from the Paris Hospital Group (AP-HP) and from the CHU of Lille. This study looked at the outcomes of 3083 children who had been born prematurely: school integration, healthcare use, and the concerns felt by their parents. It has been published in [The British Medical Journal](#).

In France, prematurity is the leading cause of neonatal mortality and is responsible for half of all disabilities of perinatal origin. It affects around 55,000 births each year. Among these many thousands of infants, 8 to 10,000 are born at 22 to 31 weeks of gestation and are described as extremely preterm or very preterm.

Extremely preterm: infants born between 24 and 26 completed weeks of gestation

Very preterm: infants born between 27 and 31 completed weeks of gestation

Moderately preterm: infants born between 32 and 34 completed weeks of gestation

EPIPAGE-2 is a French study led by Inserm whose initial population was 5170 children, born prematurely at between 5 and 7.5 months' gestation, between April and December 2011. One objective of the researchers coordinating it is to improve knowledge of how prematurity impacts children, more specifically their neuromotor, sensory, cognitive, and behavioral development as well as their learning. A total of 3083 children were assessed within the framework of specialist consultations dedicated to the study at 5.5 years of age.

"The age of five and a half is a key time in a child's development, making it possible to diagnose learning difficulties and study cognitive skills, which are much more difficult in younger children," emphasizes Pierre-Yves Ancel, EPOPé team leader from the Public Health and Social Medicine Department of Cochin Hospital AP-HP (Mother-Child Clinical Investigation Unit).

Prematurity determines neurodevelopment

A preterm child with a neurodevelopmental difficulty is a child who, as he or she grows up, deviates from the developmental characteristics observed in most children born at term.

"The objective of the study is to paint a precise picture of the difficulties faced by these children during their development in order to enable appropriate care," explains Véronique Pierrat, EPOPé team researcher and neonatologist at Lille University Hospital.

The study reveals that the more premature the birth, the more the child will present neurodevelopmental difficulties. While 27% of children born extremely preterm were found to have severe or moderate developmental difficulties, 19% of those born very preterm presented similar difficulties, compared to 12% of children born moderately preterm.

These difficulties include motor, vision or hearing difficulties, or intellectual disabilities. Regardless of how preterm the children were, more than one third of them were found to have so-called minor difficulties. However, the majority of those minor difficulties were still found to require support and the right care to prevent them from affecting the child's daily life or learning.

School integration and complex developmental interventions

The results of the study show that the more premature the birth, the more the child's schooling needs to be adapted. While 93% of moderately preterm children were enrolled in regular classes (with no specific support), this proportion was only 73% for children born extremely preterm.

It can also be noted that over half of the children born extremely preterm, one third of those born very preterm and one quarter of those born moderately preterm benefited from complex developmental interventions (speech therapy, physiotherapy, psychological support, etc.). However, 20 to 40% of children with severe difficulties received no support.

Parental concerns

The parents were asked about the general health of their children, their behavior, schooling and quality of social interactions, as well as their concerns about their development. The study highlights the importance of the environment in which the child develops and reinforces the need to offer families coordinated medical, educational, and social support. These concerns are real, even when the child's development is considered normal. Therefore they deserve to be better understood and will continue to be monitored.

Further analysis of the links between development at 2 years of age and development at 5.5 years of age is expected to provide a better understanding of how to improve the monitoring of these children.

For their families, it is important to emphasize that development at a given age is not set in stone, that the child's brain is still developing, and that the difficulties observed can be managed and supported, provided that they have been properly identified and the care pathways optimized.

This cohort continues to be monitored with a new collection of information planned for when the children are 10 years old.

Sources

Neurodevelopmental outcomes at 5 years among children born preterm: The EPIPAGE-2 cohort study.

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