Infant movement diagnostics (IMD)/ System for evaluating infant movement using gesture recognition

Tech ID: 21662 / UC Case 2011-032-0

BRIEF DESCRIPTION

Researchers at UC Irvine have developed a non-invasive wireless method to measure, quantify and analyze infant movement to identify preterm infants at risk for neurological disorders such as cerebral palsy, mental retardation, autism, or intraventricular hemorrhage.

ADVANTAGES

This invention is the first to predict neurological disorders using a non-invasive measure of spontaneous movement in infants. This system overcomes the current difficulties encountered with human observers, such as subjectivity and fatigue.

FULL DESCRIPTION

Preterm infants suffer from increased incidences of neurological disorders such as cerebral palsy, mental retardation, autism, or intraventricular hemorrhage. Conventional methods to analyze preterm infant movement for intervention purposes involve directly observing or videotaping the infant and having an observer qualitatively analyze the movements using predetermined movement scales. This is a time-consuming and laborious task that requires trained expertise. Therefore, a need exists for improved technologies that enable continuous monitoring of infant movement and subsequent assessment these movements.

Researchers at UC Irvine have developed a wireless method to track and analyze infant movement. The system uses wireless accelerometers on the infant's extremities to monitor infant movement. The signals are transmitted wirelessly to a processing unit that analyzes the infant movement and compares it to a reference standard to determine if the infant is at risk to develop medical conditions.

STATE OF DEVELOPMENT

A prototype has been developed and tested.

SUGGESTED USES

This system can be used to monitor preterm infants, who can be predisposed to develop neurological disorders. This system can be also be used for both clinical and research studies focused on pediatric neurology, behavioral, movement disorders, and metabolism.

PATENT STATUS

Country	Type	Number	Dated	Case

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OTHER INFORMATION

CATEGORIZED AS

- » **Medical**
  - » Research Tools
  - » Screening

RELATED CASES

2011-032-0

United States Of America	Issued Patent	8,961,438	02/24/2015	2011-032	

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