

POLICY STATEMENT

Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of All Children

Committee on Fetus and Newborn

Age Terminology During the Perinatal Period

ABSTRACT. Consistent definitions to describe the length of gestation and age in neonates are needed to compare neurodevelopmental, medical, and growth outcomes. The purposes of this policy statement are to review conventional definitions of age during the perinatal period and to recommend use of standard terminology including gestational age, postmenstrual age, chronological age, corrected age, adjusted age, and estimated date of delivery. *Pediatrics* 2004;114:1362–1364; *gestational age, postmenstrual age, chronological age, menstrual age, conceptional age, postconceptional age, corrected age, adjusted age, estimated date of delivery, estimated date of confinement.*

INTRODUCTION

Consistent definitions to describe the length of gestation and age in neonates are needed to compare neurodevelopmental, medical, and growth outcomes. The terms “gestational age,” “postmenstrual age,” “corrected age,” and “postconceptional age” have frequently been defined unconventionally,^{1,2} misapplied,^{3–5} or left undefined.^{6,7} Inconsistent use of terminology limits the accurate interpretation of data on health outcomes for newborn infants, especially for those born preterm or conceived using assisted reproductive technology. The purposes of this statement are to review conventional definitions of age during the perinatal period and to recommend standard terminology.

“Gestational age” (or “menstrual age”) is the time elapsed between the first day of the last normal menstrual period and the day of delivery (Fig 1).^{8–10} The first day of the last menstrual period occurs approximately 2 weeks before ovulation and approximately 3 weeks before implantation of the blastocyst. Because most women know when their last period began but not when ovulation occurred, this definition traditionally has been used when estimating the expected date of delivery. As long as menstrual dates are remembered accurately, this method of estimating the date of delivery is reliable.¹¹ Minor inaccuracy (4–6 days) in the expected date of delivery determined from menstrual dates is attributable to inherent biological variability in the relative timing of onset of the last menstrual period, fertilization of the egg, and implantation of the blastocyst.¹² Additional inaccuracy (weeks) may occur in women

who have menstrual cycles that are irregular or variable in duration or if breakthrough bleeding occurs around the time of conception. Gestational age is conventionally expressed as completed weeks. Therefore, a 25-week, 5-day fetus is considered a 25-week fetus. To round the gestational age of such a fetus to 26 weeks is inconsistent with national and international norms.² The term “gestational age” should be used instead of “menstrual age” to describe the age of the fetus or newborn infant.

“Chronological age” (or “postnatal” age) is the time elapsed after birth (Fig 1). It is usually described in days, weeks, months, and/or years. This is different from the term “postmenstrual age.” Postmenstrual age is the time elapsed between the first day of the last menstrual period and birth (gestational age) plus the time elapsed after birth (chronological age). Postmenstrual age is usually described in number of weeks and is most frequently applied during the perinatal period beginning after the day of birth. Therefore, a preterm infant born at a gestational age of 33 weeks who is currently 10 weeks old (chronological age) would have a postmenstrual age of 43 weeks. When postmenstrual age is quantitated in weeks and days for postnatal management reasons, a 33-week, 1-day gestational age infant who is 10 weeks, 5 days chronological age would have a postmenstrual age of 43 weeks, 6 days.

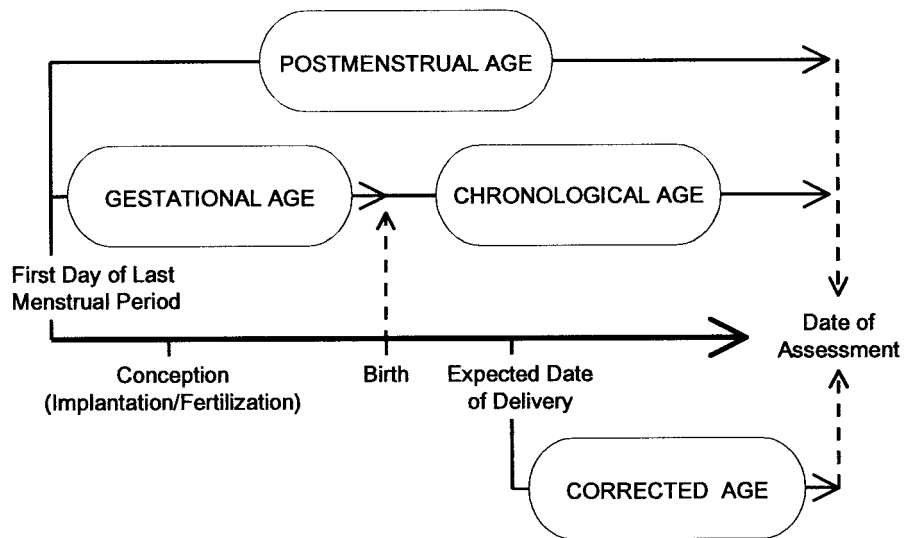
“Corrected age” (or “adjusted age”) is a term most appropriately used to describe children up to 3 years of age who were born preterm (Fig 1). This term is preferred to “corrected gestational age” or “gestational age” and represents the age of the child from the expected date of delivery.^{13,14} Corrected age is calculated by subtracting the number of weeks born before 40 weeks of gestation from the chronological age. Therefore, a 24-month-old, former 28-week gestational age infant has a corrected age of 21 months according to the following equation:

$$24 \text{ months} - [(40 \text{ weeks} - 28 \text{ weeks}) \\ \times 1 \text{ month}/4 \text{ weeks}]$$

Corrected age and chronological age are not synonymous in preterm infants. Additionally, the term “corrected age” should be used instead of “adjusted age.”

“Conceptional age” is the time elapsed between the day of conception and the day of delivery. (The term “conceptual age” is incorrect and should not be

Fig 1. Age terminology during the perinatal period.



used.) Because assisted reproductive technologies accurately define the date of fertilization or implantation, a precise conceptional age can be determined in pregnancies resulting from such technologies. Much of the variability inherent in other methods of gestational age determination,^{11–13} except for that attributed to timing of implantation, is eliminated when the date of conception is determined during assisted reproductive procedures. The convention for calculating gestational age when the date of conception is known is to add 2 weeks to the conceptional age.¹⁰ Therefore, gestational age is 2 weeks longer than conceptional age; they are not synonymous terms. When describing the age of a fetus or neonate, “gestational age” is the term conventionally applied. This is particularly important for interpreting outcome studies of preterm infants. As an example, a preterm infant conceived using assisted reproductive technology who has a conceptional age of 25 weeks has a gestational age of 27 weeks. Outcomes for this infant should be compared with those of 27-week gestational age infants, not 25-week gestational age infants. To avoid confusion, the term “gestational age” should be used. The terms “conceptional age” and “postconceptional age,” reflecting the time elapsed after conception, should not be used.

Gestational age is often determined by the “best obstetric estimate,” which is based on a combination of the first day of last menstrual period, physical examination of the mother, prenatal ultrasonography, and history of assisted reproduction. The best obstetric estimate is necessary because of gaps in obstetric information and the inherent variability (as

great as 2 weeks) in methods of gestational age estimation.^{8,10,14–19} Postnatal physical examination of the infant is sometimes used as a method to determine gestational age if the best obstetric estimate seems inaccurate. Therefore, methods of determining gestational age should be clearly stated so that the variability inherent in these estimations can be considered when outcomes are interpreted.^{8,10,14–19}

RECOMMENDATIONS

- Standardized terminology should be used when defining ages and comparing outcomes of fetuses and newborns. The recommended terms (Table 1) are:
 - Gestational age (completed weeks): time elapsed between the first day of the last menstrual period and the day of delivery. If pregnancy was achieved using assisted reproductive technology, gestational age is calculated by adding 2 weeks to the conceptional age.
 - Chronological age (days, weeks, months, or years): time elapsed from birth.
 - Postmenstrual age (weeks): gestational age plus chronological age.
 - Corrected age (weeks or months): chronological age reduced by the number of weeks born before 40 weeks of gestation; the term should be used only for children up to 3 years of age who were born preterm.
- During the perinatal period neonatal hospital stay, “postmenstrual age” is preferred to describe

TABLE 1. Age Terminology During the Perinatal Period

| Term | Definition | Units of Time |
|-------------------|---|----------------------------|
| Gestational age | Time elapsed between the first day of the last menstrual period and the day of delivery | Completed weeks |
| Chronological age | Time elapsed since birth | Days, weeks, months, years |
| Postmenstrual age | Gestational age + chronological age | Weeks |
| Corrected age | Chronological age reduced by the number of weeks born before 40 weeks of gestation | Weeks, months |

the age of preterm infants. After the perinatal period, "corrected age" is the preferred term.

3. "Conceptional age," "postconceptional age," "conceptual age," and "postconceptual age" should not be used in clinical pediatrics.
4. Publications reporting fetal and neonatal outcomes should clearly describe methods used to determine gestational age.

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