NICHD Terminology and Definitions[7, 8]

Fetal Heart Rate and Uterine Activity Characteristics as per NICHD

Term	Definition
Baseline Rate	Approximate mean FHR rounded to increments of 5 bpm during a 10-minute window excluding accelerations and decelerations and periods of marked variability. There must be ≥2 minutes of identifiable baseline segments (not necessarily contiguous) in any 10-minute window, or the baseline for that period is indeterminate. In such cases, one may need to refer to the previous 10-minute window for determination of the baseline.
Bradycardia	Baseline rate of <110 bpm.
Tachycardia	Baseline rate of >160 bpm.
Baseline Variability	Determined in a 10-minute window, excluding accelerations and decelerations. Fluctuations in the baseline FHR that are irregular in amplitude and frequency and are visually quantified as the amplitude of the peak-to-trough in bpm.
Absent variability	Amplitude range undetectable.
Minimal variability	Amplitude range visually detectable but ≤5 bpm. (Greater than undetectable but ≤5 bpm)
Moderate variability	Amplitude range 6–25 bpm.
Marked variability	Amplitude range >25 bpm.
Acceleration	Visually apparent **abrupt** increase in FHR. Abrupt increase is defined as an increase from onset of acceleration to peak is <30 seconds. Peak must be ≥15 bpm, must last ≥15 seconds, but <2 minutes from the onset to return. Before 32 weeks of gestation, accelerations are defined as having a peak ≥10 bpm and duration of ≥10 seconds.
Prolonged Acceleration	Acceleration ≥2 minutes but <10 minutes in duration. Acceleration lasting ≥10 minutes is defined as a baseline change.
Early Deceleration	Visually apparent, usually symmetrical, **gradual** decrease and return of FHR associated with a uterine contraction. The gradual FHR decrease is defined as one from the onset to FHR nadir of ≥30 seconds. The decrease in FHR is calculated from onset to nadir of deceleration. The nadir of the deceleration occurs at the same time as the peak of the contraction. In most cases, the onset, nadir, and recovery of the deceleration are coincident with the beginning, peak, and ending of the contraction, respectively.

Term	Definition
Late Deceleration	Visually apparent, usually symmetrical, **gradual** decrease and return of FHR associated with a uterine contraction. The gradual FHR decrease is defined as from the onset to FHR nadir of ≥30 seconds. The decrease in FHR is calculated from onset to the nadir of deceleration. The deceleration is delayed in timing, with nadir of the deceleration occurring after the peak of the contraction. In most cases, the onset, nadir, and recovery of the deceleration occur after the beginning, peak, and ending of the contraction, respectively.
Variable Deceleration	Visually apparent **abrupt** decrease in FHR. An abrupt FHR decrease is defined as from the onset of the deceleration to the beginning of the FHR nadir of <30 seconds. The decrease in FHR is calculated from the onset to the nadir of deceleration. The decrease in FHR is ≥15 bpm, lasting ≥15 seconds, and <2 minutes in duration. When variable decelerations are associated with uterine contractions, their onset, depth, and duration commonly vary with successive uterine contractions. Variable decelerations have a depth criteria; they must drop at least 15 or more bpm to be considered a variable deceleration.
Prolonged Deceleration	Visually apparent decrease in FHR from baseline that is ≥15 bpm, lasting ≥2 minutes, but <10 minutes. A deceleration that lasts ≥10 minutes is baseline change. Prolonged decelerations have a depth criteria; they must drop at least 15 or more bpm to be considered a prolonged deceleration.
Recurrent Decelerations	Occurring with ≥50% of contractions in any 20 minute window.
Intermittent Decelerations	Occurring with <50% of contractions in any 20 minute window.
Sinusoidal Pattern	Visually apparent, smooth, sine wave-like undulating pattern in FHR baseline with cycle frequency of 3-5/minutes that persists for ≥20 minutes.
Uterine Activity	Uterine activity is assessed based on the number of contractions that are occurring in a 10 minute segment, averaged over a 30 minute period.
Normal Uterine Activity	5 or less contractions in a 10 minute segment, averaged over a 30 minute period.
Tachysystole	Excessive uterine activity; more than 5 contractions in a 10 minute segment averaged over a 30 minute period. Tachysystole can be the result of both spontaneous and stimulated labor.

Derived from: Macones, G. A., Hankins, G. D., Spong, C. Y., Hauth, J. D., & Moore, T. (2008). The 2008 National Institute of Child Health Human Development workshop report on electronic fetal monitoring: Update on definitions, interpretations, and research guidelines. *Obstetrics & Gynecology*, 112(3), 661–666; and *Journal of Obstetric, Gynecologic and Neonatal Nursing*, 37(5), 510–515. [7,8]

(See Appendix A for sample EFM tracings with most of these fetal heart rate characteristics)
(See Appendix B for sample EFM tracings with normal uterine activity and tachysystole)
(See Appendix C for sample EFM tracings with sinusoidal pattern)