Baseline variability
- Minimal variability
- Absent variability not accompanied by recurrent decelerations
- Marked variability

Accelerations
- Absence of induced accelerations after fetal stimulation

Periodic or episodic decelerations
- Recurrent variable decelerations accompanied by minimal or moderate BL variability
- Prolonged deceleration (≥ 2 minutes but < 10 minutes)

Recurrent late decelerations with moderate BL variability
- Variable decelerations with other features, such as a slow return to baseline, overshoots, or shoulders

References

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Category II
- Indeterminate
- Not predictive of abnormal fetal acid-base status
- Requires evaluation, continued surveillance, and reevaluation
- Take into account the entire clinical circumstances

Baseline rate
- Bradycardia not accompanied by absent variability
- Tachycardia

Category I
- Normal
- Strongly predictive of normal fetal acid-base status at the time of observation
- May be followed in a routine manner, and no specific action is required.

Baseline rate: 110-160 beats per minute
- Baseline FHR variability: moderate
- Accelerations: present or absent
- Early decelerations: present or absent
- Late or variable decelerations: absent

Predicts abnormal fetal acid-base status
- Requires prompt evaluation
- Expediently resolve the abnormal FHR pattern
- Provide maternal oxygen
- Change maternal position
- Discontinue labor stimulation
- Treat hypotension

Category III
- Absent baseline FHR variability and any of the following:
  - Recurrent late decelerations
  - Recurrent variable decelerations
  - Bradycardia
- Sinusoidal pattern
- Smooth, sine wave-like, undulating pattern of the FHR baseline of regular frequency of 3-5 cycles per minute that persists for ≥ 20 minutes.

Category III Definitions
- Baseline: The mean FHR rounded to increments of 5 beats per minute during a 10-minute window, excluding accelerations and decelerations and periods of marked FHR variability.
- Bradycardia: BL FHR < 110 beats per minute.
- Tachycardia: BL FHR > 160 beats per minute.

Variable decelerations
- Abrupt decrease in FHR; an abrupt increase from the onset of the acceleration to the peak in < 30 seconds. The peak must be ≥ 15 bpm and the acceleration must last ≥ 15 seconds and < 2 minutes in duration.

Late deceleration
- Usually symmetrical gradual decrease and return of the FHR associated with a uterine contraction. Onset to the FHR nadir ≥ 30 seconds. Late in timing with nadir occurring after peak of contraction (*contraction peak to nadir < 18 seconds).

NICHD Definitions
- Early deceleration: Usually symmetric gradual decrease (onset to FHR nadir ≥ 30 seconds) and FHR returns with contraction. Nadir of deceleration occurs at the same time as peak of contraction (*contraction peak to nadir < 18 seconds).
- Variable deceleration: Abrupt decrease in FHR with onset to beginning of FHR nadir < 30 seconds. Decrease in FHR ≥ 15 bpm lasting ≥ 15 seconds and < 2 minutes in duration.
- Late deceleration: Usually symmetrical gradual decrease and return of the FHR associated with a uterine contraction. Onset to the FHR nadir ≥ 30 seconds. Late in timing with nadir occurring after peak of contraction (*contraction peak to nadir ≥ 18 seconds).

Tachycardia: Applies to both spontaneous or stimulated labor. ≥ 5 contractions in 10 minutes, averaged over a 30-minute window. Tachycardia exists with or without FHR decelerations.

NICHD Definitions
- Baseline: The mean FHR rounded to increments of 5 beats per minute during a 10-minute window, excluding accelerations and decelerations and periods of marked FHR variability.
- Bradycardia: BL FHR < 110 beats per minute.
- Tachycardia: BL FHR > 160 beats per minute.

Variable decelerations
- Abrupt decrease in FHR; an abrupt increase from the onset of the acceleration to the peak in < 30 seconds. The peak must be ≥ 15 bpm and the acceleration must last ≥ 15 seconds from the onset to return to BL at ≥ 32 weeks of gestation.

NICHD Definitions
- Early deceleration: Usually symmetric gradual decrease (onset to FHR nadir ≥ 30 seconds) and FHR returns with contraction. Nadir of deceleration occurs at the same time as peak of contraction (*contraction peak to nadir < 18 seconds).
- Variable deceleration: Abrupt decrease in FHR with onset to beginning of FHR nadir < 30 seconds. Decrease in FHR ≥ 15 bpm lasting ≥ 15 seconds and < 2 minutes in duration.
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Tachycardia: Applies to both spontaneous or stimulated labor. ≥ 5 contractions in 10 minutes, averaged over a 30-minute window. Tachycardia exists with or without FHR decelerations.

DISCLAIMER: Learning Resources International, Inc. does not endorse these definitions as a standard of care and encourages a deeper knowledge of lag time* and other concepts. The current report does not offer nurses and other providers sufficient guidance to achieve the goal of a positive outcome for the newborn. We strongly advise nurses, particularly those in leadership and education roles, to review the research literature regarding fetal physiology and the efficacy of interventions to support fetal adaptations during labor and birth. Murray, M., Huelsmann, G., Mahlmeister, L., (2008). On NIH Workshop Report. JOGNN, 38, 1-3. DOI: 10.1111/j.1552-6909.2008.00308.x
14.1 Using the NICHD criteria, the baseline in this example would be rising from 150 to 155 to 165 if one uses increments of 5 bpm. Rising baseline was not a concept that was defined by the NICHD group.
14.2 If variability is assessed as a unit, do you think short-term variability is also absent?
14.3 This sinusoidal pattern was a pathologic pattern and occurred minutes before fetal decompensation to a terminal bradycardic level. The baby was born asphyxiated and has permanent brain damage. Note the tachycardic rate. Would you record “sinusoidal” or a baseline rate of 180 bpm? Recommendations for documentation of a sinusoidal pattern were not provided by the NICHD group.
14.4 The NICHD criteria for an acceleration excludes some accelerations that also have meaning.
14.5 Late deceleration followed by early deceleration.
Confusion has been reported by some clinicians when they saw only variable decelerations but were instructed to strictly apply the NICHD group’s rule of 30 seconds or more to the nadir as a characteristic of late decelerations. The last deceleration is a severe variable deceleration using traditional terminology. Note this is European-scaled paper.
14.7 If you decide the baseline is 150 bpm, this will not be a prolonged deceleration if you accept the NICHD group's criteria of a drop of at least 15 bpm for 2 or more minutes to call the deceleration prolonged.
14.8 The first deceleration would be classified as a late deceleration if you strictly apply the NICHD definitions since the onset to nadir is 30 seconds and the nadir occurs after the peak of the contraction. However, using the peak-to-nadir research findings, this would best be classified as an early deceleration. The second deceleration would best be classified as a late deceleration. It meets the NICHD criteria for 30 seconds to the nadir and also meets the traditional research finding of a peak-to-nadir lag time of more than 20 seconds.