

## EFM DEFINITIONS

<b>BASELINE FHR</b>	Normal 110 to 160. Approximate FHR rounded to increments of 5 beats/min during a 10-minute segment, excluding periodic or episodic changes and periods of marked variability.
<b>TACHYCARDIA</b>	FHR > 160. at least 10 minutes
<b>BRADYCARDIA</b>	FHR < 110. at least 10 minutes
<b>VARIABILITY</b>	Fluctuations in the Baseline FHR of two cycles per minute or greater. These fluctuations are irregular in amplitude and frequency and are caused by interaction of the ANS with the fetal SA node; presence usually means fetal heart, ANS and oxygenation are normal
<b>ABSENT:</b> - Amplitude range is undetectable <b>MINIMAL:</b> - Amplitude range or equal to 5 bpm <b>MODERATE:</b> - Amplitude range 6-25 bpm <b>MARKED:</b> - Amplitude range 25 bpm	
<b>PERIODIC and EPISODIC PATTERNS</b>	
<b>PERIODIC</b> -----	associated with contractions
<b>EPISODIC</b> -----	not associated with contractions
<b>ACCELERATIONS</b>	(periodic or episodic) acme is = or > 15 bpm above the baseline and lasts = or > 15 seconds. <b>Before 32 weeks, the acme is = or &gt; 10 bpm and lasts + or &gt; 10 seconds.</b>
<i>Episodic accelerations</i>	Shape irregular or abrupt. Associated with fetal movement
<i>Periodic accelerations</i>	More uniform shape, during contractions because of sympathetic stimulation or reflex response to umbilical vein compression

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<b>DECELERATIONS</b>	
<b>EARLY</b>	<u>Gradual</u> decrease (onset to nadir = or > 30 seconds) and return to baseline FHR associated with contraction (PERIODIC). Uniform shape. Nadir at peak of contraction. Usually starts and ends in time with contraction. Caused by head compression or cerebral flow changes with vagal response.
<b>LATE</b>	<u>Gradual</u> decrease (onset to nadir = or > 30 seconds) and return to baseline FHR associated with contraction. (PERIODIC) Uniform shape. Nadir after peak of contraction. Cause: uteroplacental insufficiency, acute or chronic.
<b>VARIABLE</b>	<u>Abrupt</u> decrease (onset to nadir < 30 seconds) in FHR. Non-uniform and different shapes. PERIODIC or EPISODIC. At any time during contraction. Cause: cord compression, decreased cord perfusion.
<b>Recurrent decelerations:</b>	More than 50% during a 20-minute window (otherwise, intermittent)
<b>Prolonged deceleration:</b>	Lasts more than 2 minutes but less than 10 minutes.
<b>UNDULATING PATTERN</b>	Sinusoidal---Fetal compromise.
	Pseudo sinusoidal---Maternal narcotic use or fetal thumb sucking.

## EFM INTERPRETATION

**CATEGORY I:** FHR include **ALL** of the following:

- Baseline 110-160 bpm
- Variability moderate
- Absent variable or late decelerations
- Accelerations present or absent

**CATEGORY II:** Includes all the tracings that are not category I or III.  
May represent an appreciable part of those encountered in clinical practice.

Any of the following:

**Baseline:** Bradycardia without absent variability  
Tachycardia

**Variability:** Minimal variability  
Absent variability without recurrent decelerations  
Marked variability

**Accelerations:** Absence of induced accelerations after fetal stimulation

Periodic or episodic decelerations

- Recurrent variable with minimal or moderate variability
- Prolonged decelerations > 2 minutes but < 10 minutes
- Recurrent late decelerations with moderate variability
- Variable decelerations with slow return to baseline
- "Shoulders" or "Overshoots"

## EFM INTERPRETATION

**CATEGORY III:** Includes either:

**Absent variability** + Recurrent late decelerations  
Recurrent variable decelerations  
Bradycardia

**Sinusoidal pattern**

**TACHYSYSTOLE:** More than 5 contractions in 10 minutes  
over 30-minute window