

It's gotta beat, but can you dance to it?



**FHR**  
Interpretation



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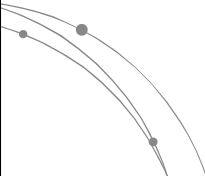

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**NICHD**

- Guidelines, 1997
- Uniformity
- New terms



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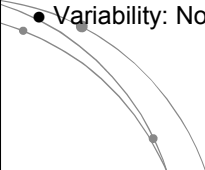

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**So what's new baby?**

- Baseline: No ranges
- Decels: reoccurring vs. persistent
- Periodic: with UC's
- Episodic: without UC's
- Variability: No STV or LTV



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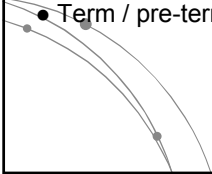
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## Baseline

- Let's start at the beginning
- 110-160
- Over a 10 minute period
- In between UC's, periodic/episodic  $\Delta$ 's
- Term / pre-term influence




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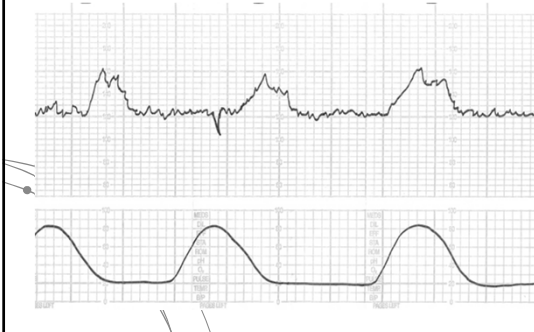
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## Baseline




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## Variability

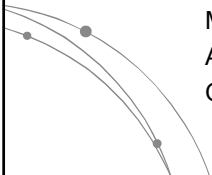
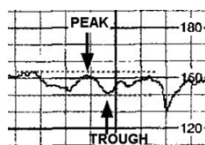
- Sympathetic / Parasympathetic influences
- Oscillations / fluctuations over 10 minutes
- Significance:

Indicates CNS status

Maturity

Acid base

Oxygenation




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## I like squiggles!



- Absent: undetectable / "ruler"
- Minimal: < 5 BPM
- Moderate: 6 to 25 BPM
- Marked: > 25 BPM




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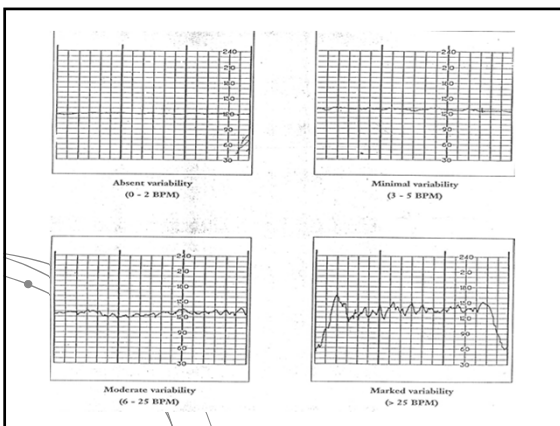
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## Absent variability




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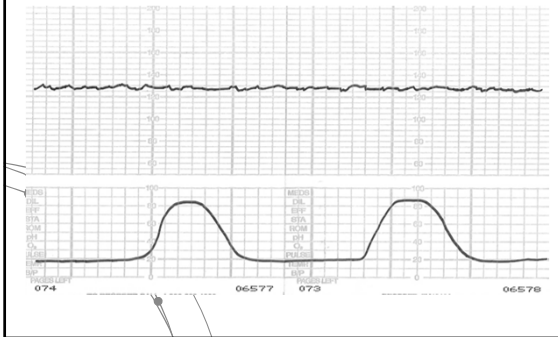
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### Minimal variability




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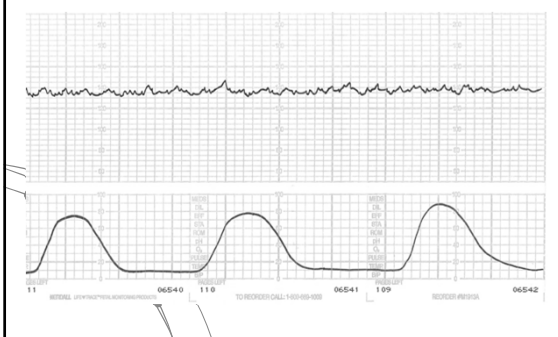
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### Moderate variability




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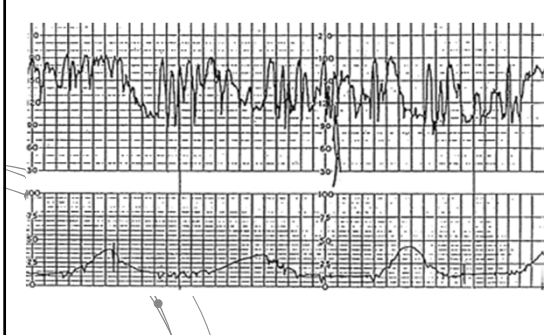
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### Marked Variability




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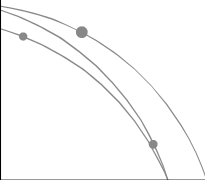
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## Variability

- # 1 MONITOR assessment of fetal well-being

## Document !


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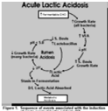


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## But why mommy?

- Causes of decreased variability


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## But why mommy?

- Causes for increased variability


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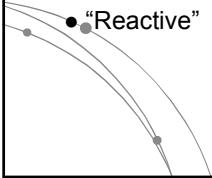
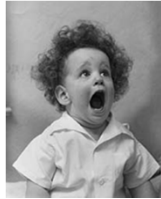
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## Accelerations

- Episodic vs. periodic
- Indications
  - ↑ 32 weeks: 15 X 15 BPM
  - ↓ 32 weeks: 10 X 10 BPM
- Prolonged: 2-10 minutes
- "Reactive"




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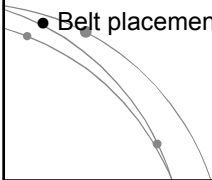
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## Just a bit about contractions

- Size DOESN'T matter!
- Irritability
- Patient reliability
- Real Estate
- Belt placement




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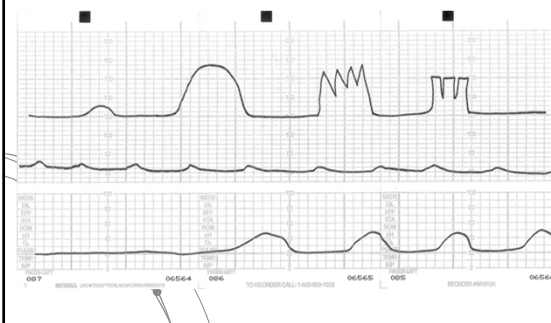
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## Contractions




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## Accelerations




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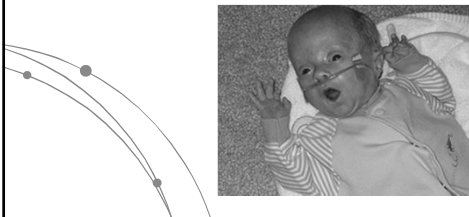
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## Decelerations

- Reoccurring:  $\uparrow$  50% within 20 minutes
- No “combo” deceleration




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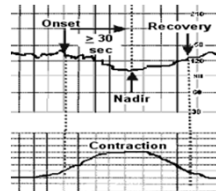
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## Early decelerations

- Etiology
- Characteristics: Uniform in shape “U”, mirror UC’s
- Prognosis
- Treatments




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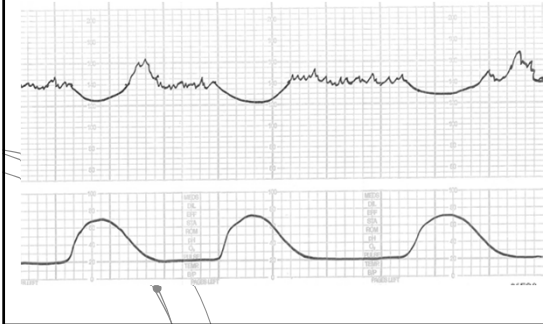
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### Early decelerations




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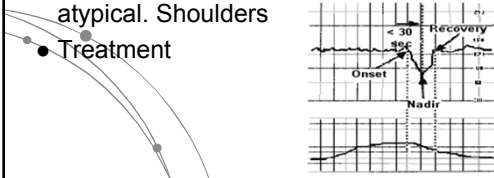
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### Variable deceleration

- Etiology
- Characteristics: Variable in shape/timing, may be "V", "W" or square shaped
- Prognosis: Size does matter! True vs. atypical. Shoulders
- Treatment




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### Variable decelerations




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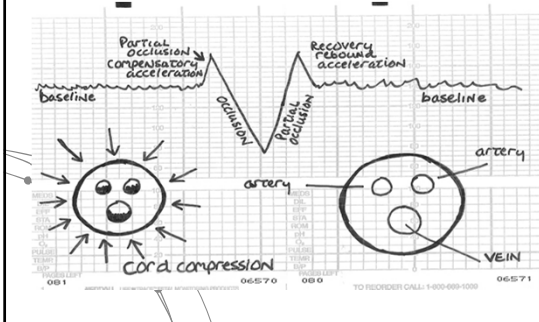
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What the heck are “shoulders”?




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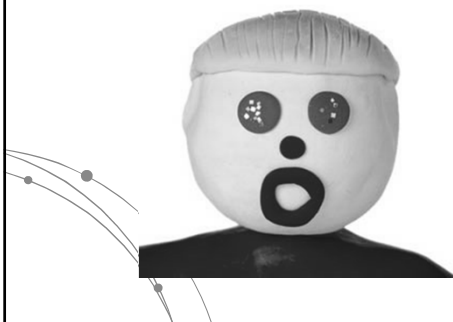
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Mr. Bill




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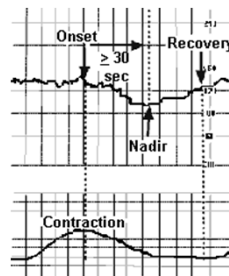
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### Late decelerations

- Etiology
- Characteristics
- Prognosis
- Treatments




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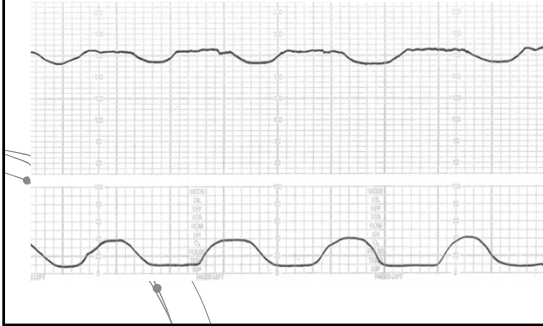
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### Late decelerations




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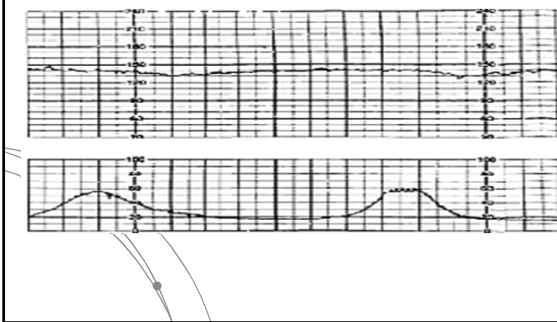
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### Late deceleration




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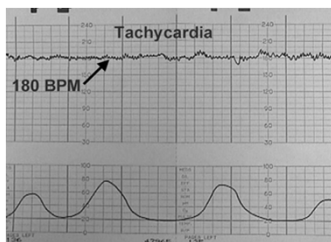
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### Tachycardia

- Definition
- Causes
- Significance




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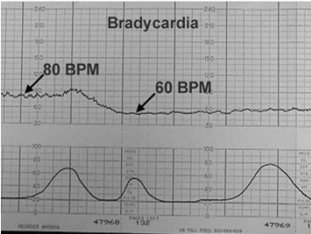
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### Bradycardia

- Definition
- Causes
- Significance



The ECG strip shows a regular rhythm with a heart rate of approximately 60 BPM, which is within the normal range for a resting heart rate. The top trace shows a regular rhythm with a heart rate of 80 BPM, and the bottom trace shows a regular rhythm with a heart rate of 60 BPM. The heart rate is marked as 80 BPM and 60 BPM.

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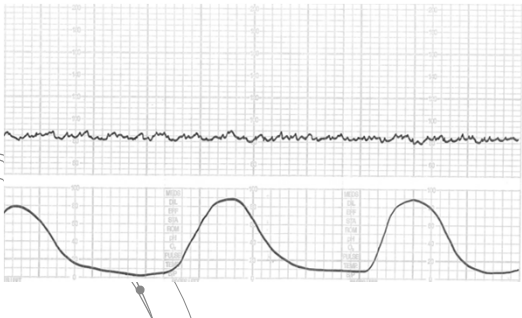
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### Bradycardia



The ECG strip shows a regular rhythm with a heart rate of approximately 60 BPM, which is within the normal range for a resting heart rate. The heart rate is marked as 60 BPM.

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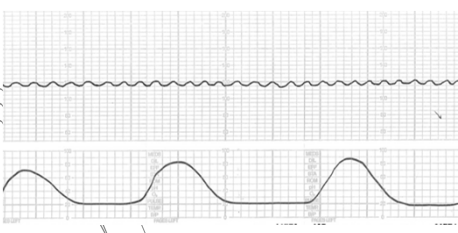
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### Sinusoidal

- True vs. pseudo
- Significance



The ECG strip shows a regular rhythm with a heart rate of approximately 60 BPM, which is within the normal range for a resting heart rate. The heart rate is marked as 60 BPM.

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### Keep it simple baby

Reassuring?      Not reassuring?




- **No idea?** Describe it
- Fax strips
- Document treatments and *responses*

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### Transport considerations

- ACOG timing
- Doppler
- Obesity
- FM
- Multiple gestations
- Continuous monitoring?

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### Strip reviews




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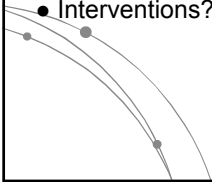
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### Answer?

- Twin tracing: one twin in reassuring the other twin has VARIABLE decelerations.
- Hint: they are square in shape and do not start after the peak of the contraction
- Interventions?




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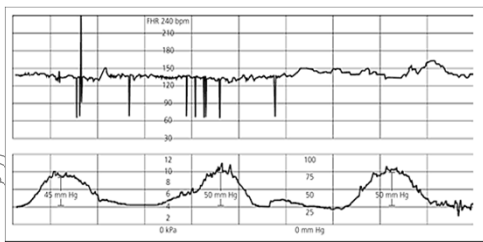
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### Strip # 2



Reassuring or not reassuring?

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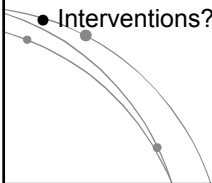
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### Answer

- Reassuring FHR tracing
- Hint: moderate variability and accelerations
- Fetal arrhythmia
- Interventions?




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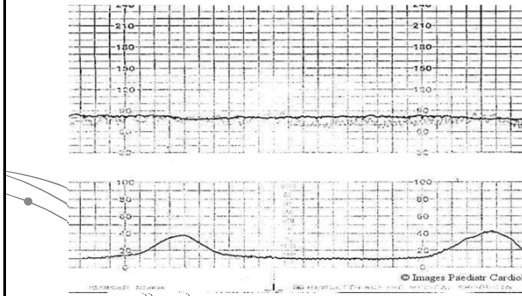
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### Strip # 3



Reassuring or not reassuring?

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### Answer

- Not reassuring
- Hint: absent variability with bradycardic rate
- Intervention?




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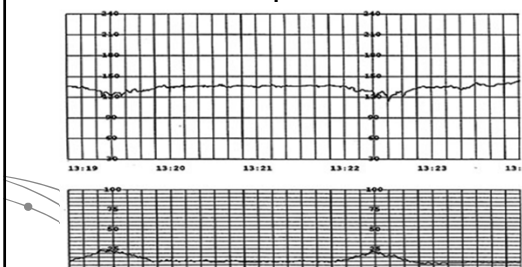
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### Strip # 4



Reassuring or not reassuring?

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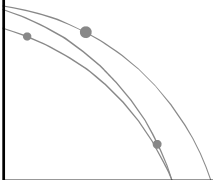
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## Answer

- Questionable
- Hint: Minimal variability (sleep pattern?)
- Early decel: etiology?
- Intervention?




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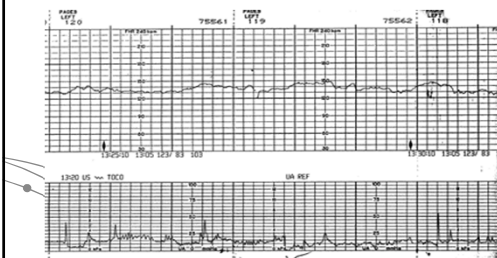
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## Strip # 5



Reassuring or not reassuring?

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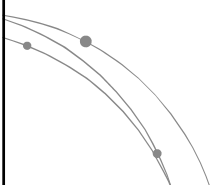
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## Answer

- Reassuring
- Hint: Moderate variability with accelerations
- Interventions?




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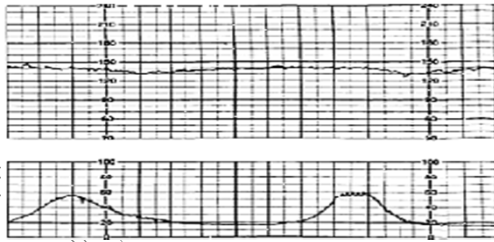
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### Strip # 6



Reassuring or not reassuring?

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### Answer

- Not reassuring
- Hint: minimal variability, late decelerations
- Interventions?



"SAY, PLEASE!"

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