

Essentials of Fetal Monitoring

2.0

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Current. Comprehensive. Continuing Education Online.

Essentials of Fetal Monitoring Curriculum

Essentials of Fetal Monitoring 2.0

Options ▾

Essentials of Fetal Monitoring Group Access.
Includes access for one year for 30 participants, including 20 (20 EFM) (5 RX) CNE Contact Hours or 20 CME Credits for each participant.
Includes access to Fetal Heart Rate Monitoring e-textbook.
To view and print the certificate, click Print Certificate next to the Evaluation (only).

	Part 1: Extrinsic and Intrinsic Factors, Fetal Acidosis, and Uterine Activity Status: In Progress	Launch ▾
	Part 2: Fetal Heart Rate Assessment, Baseline, Variability, Accelerations, Decelerations, and Patterns Status: Registered	Launch ▾
	Part 3: Categories, Fetal Heart Rate Dysrhythmias, Antepartum Testing, Communication, and Documentation Status: Registered	Launch ▾
	Post Test Status: Registered	Launch ▾

- The Essentials of Fetal Monitoring program was developed to both introduce and reinforce the essentials of fetal heart rate monitoring interpretation using NICHD nomenclature
- The Essentials of Fetal Monitoring program is also ideal to supplement professional education in preparation for EFM-certificate testing, annual mandatory training, and is eligible for **20 CNE** Contact Hours (100% EFM, 25% R_x) and **20 CME** Credits

Learning Outcomes

Upon completion the learner will be able to:

- Identify factors that place the fetus at risk.
- Discuss normal perinatal physiology.
- Select appropriate fetal heart rate (FHR) monitoring methods.
- Define components of systemic assessment of FHR monitoring information.
- Define normal and abnormal uterine activity.
- List factors affecting FHR monitoring interpretation.
- Identify physiologic interventions based on FHR interpretation.
- Describe communication and documentation responsibilities.
- Analyze FHR information, integrate, and apply knowledge using a systematic approach in actual cases.
- Successfully complete the post test with a score of 80% or higher.

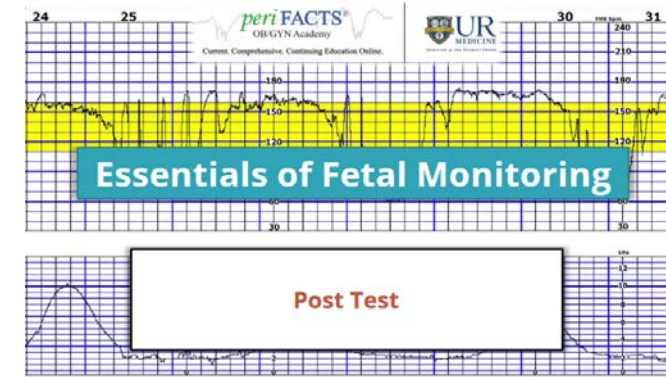
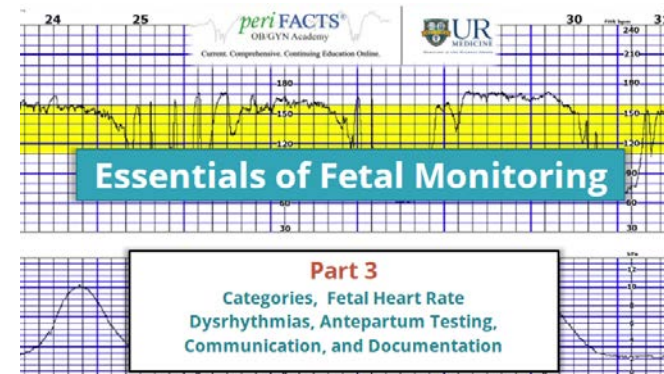
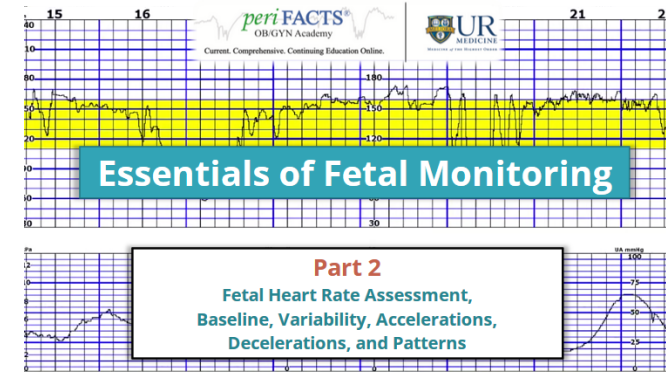
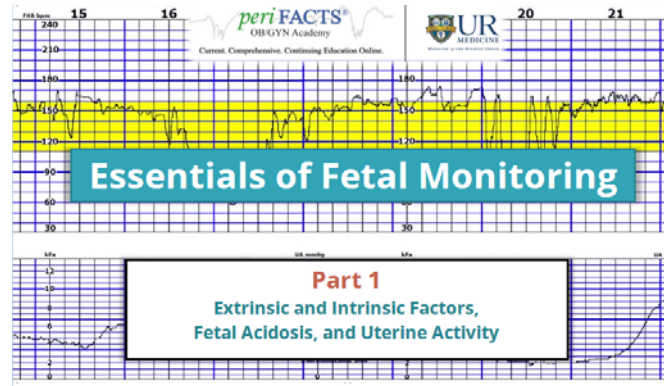
Post Test: After completing the Essentials of Fetal Monitoring program, the learner can complete the post test, which includes 12 clinical case studies each with fetal heart rate tracings for interpretation.

Program Overview

The program will discuss the following topics:

- The Goal of Fetal Heart Rate Monitoring
- Extrinsic and Intrinsic Factors and their Impact on the Fetal Heart Rate, including:
 - Maternal Factors
 - Placenta
 - Amniotic Fluid
 - Umbilical Cord
 - Hematologic Adaptations
- Fetal Circulation Intrinsic Factors
- Fetal Acidosis and Umbilical Cord Gas Assessment
- Uterine Activity Assessment including Leopold Maneuvers and Contraction Assessment
- Electronic Fetal Monitoring and FHR Assessment
- Fetal Heart Rate Baseline, Variability, and Decelerations
- Fetal Heart Rate Sinusoidal and Sinusoidal-Like Patterns
- Categories and Dysrhythmias
- Antepartum Testing
- Fetal Monitoring in the Complex Patient, including:
 - Infection
 - Obesity
 - Multiple Gestation
 - Prematurity
 - Fetal Anomalies
 - Medically Compromised Mothers
- Intrapartum Assessment
- Team Communication and Documentation

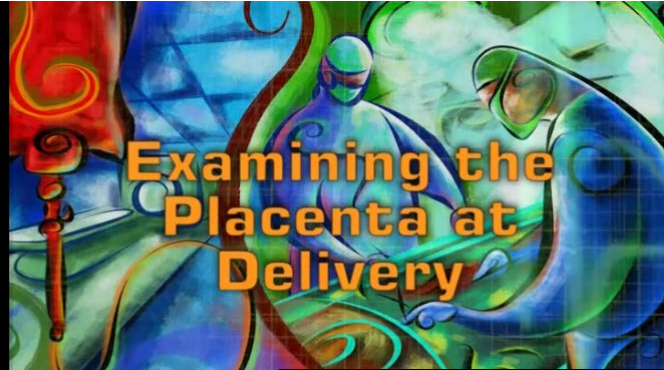
Four Parts



- Part 1: Extrinsic and Intrinsic Factors, Fetal Acidosis, and Uterine Activity
- Part 2: Fetal Heart Rate Assessment, Baseline, Variability, Accelerations, Decelerations, and Patterns
- Part 3: Categories, FHR Dysrhythmias, Antepartum Testing, Communication, and Documentation
- Post Test

Videos

Examining the Placenta

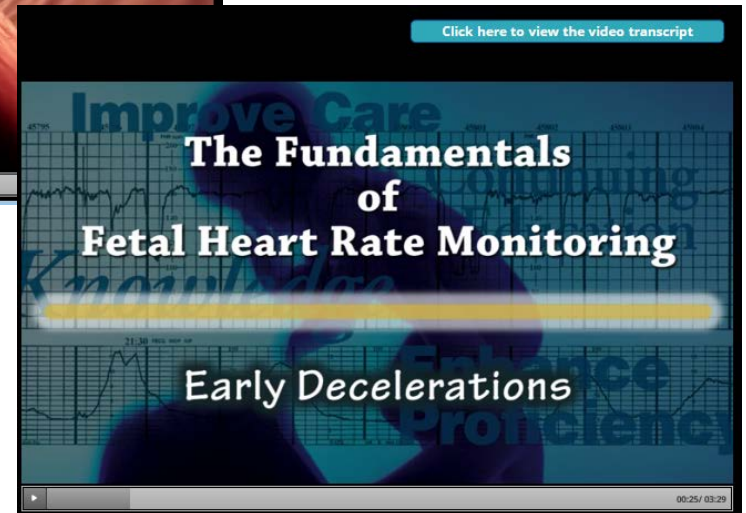


- The program includes embedded high-definition videos for further topic discussion and reinforcement

[Click here to view the video transcript](#)



[Click here to view the video transcript](#)



Tools

Extrinsic Factors


Placental Transfer Extrinsic Factors

Click each box below to learn more.

Maternal-Placental Circulation

Fetal-Placental Circulation

Mechanisms of Placental Transfer



Maternal-Placental Circulation

- Oxygenated blood from the mother enters the intervillous spaces by the endometrial arteries.
- Maternal blood pressure directs the blood toward the chorionic villi.
- Deoxygenated blood leaves the intervillous spaces via the endometrial veins and is returned to the maternal circulation.
- Maternal and fetal blood do not mix.

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Intrinsic Factors

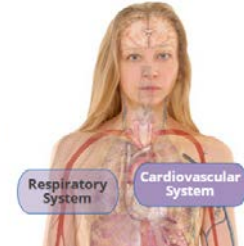
Maternal Extrinsic Factors

During pregnancy, a woman's body adapts itself to pregnancy with the goal of facilitating growth and development of the fetus. Changes occur throughout the body and occur under the influence of hormones (i.e., progesterone, estrogen, prolactin). This results in the creation of an optimal environment for the fetus.

Click each box below to learn more.

Respiratory System

Cardiovascular System



Respiratory Changes

- The demands of the pregnancy and the fetus result in an increase in maternal oxygen demands.
- Under the influence of progesterone, there is an increase in minute ventilation by 30% to 40%.
- This maximizes oxygen transport and carbon dioxide diffusion resulting in a higher PO₂ and a lower PCO₂.
- These changes favor transfer of oxygen to the fetus and the transfer of carbon dioxide from the fetus.
- The placenta bridges the maternal and fetal circulation.
- The transfer of gases and nutrients from the maternal circulation and carbon dioxide and wastes from the fetal side occurs within the intervillous spaces of the placenta.

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Fetal Monitoring in the Complex Patient

Fetal Monitoring in the Complex Patient

There are a number of maternal and fetal conditions that make FHR monitoring more difficult. Let's look at each one separately.

Click each box below to learn more.

Infection


Maternal Obesity

Multiple Gestation

Prematurity

Fetal Anomalies

Medically Compromised Mother



Nonstress Test (NST)

Click each box below to learn more.

Technique

Common Indications

Reactive NST Results

Nonreactive NST Results

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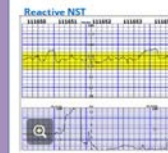
Criteria for a Reactive NST

32 weeks' gestation or greater

In 20 minutes that are equal to or greater than 15 bpm and last greater than 15 seconds from onset to the return to the baseline.

Less than 32 weeks' gestation

In 20 minutes that are equal to or greater than 10 bpm and last greater than 10 seconds from onset to the return to the baseline.




Communication and Documentation

Verbal Communication

Communication between each level of provider is to be complete in order to maintain continuity in safe patient care. A full report/handoff of the patient's demographics, assessments, interventions, and responses should be provided following the SBAR format.

- Situation
- Background
- Assessment
- Recommendation/Request



- The program contains helpful tables and interactive learning objects incorporated to reinforce the topics as the program progresses

Review Questions

The image displays three overlapping review question cards. Each card has a purple header with the text 'Review Questions' and a blue button at the bottom labeled 'Check My Answer'.

Card 1 (Top Left):

Review Questions

An amniotic fluid index that measures equal to or greater than 24 cm is indicative of:

- ☐ A. oligohydramnios.
- ☐ B. polyhydramnios.
- ☐ C. normal.

Card 2 (Middle):

Review Questions

The single most important component of the FHR is:

- ☐ A. FHR baseline.
- ☐ B. FHR variability.
- ☐ C. accelerations.

Card 3 (Bottom Right):

Review Question

A patient, who is at 34 weeks' gestation, is in your triage unit complaining of decreased fetal movement. The care provider instructs you to perform a nonstress test. The criteria you would use to evaluate the nonstress test are:

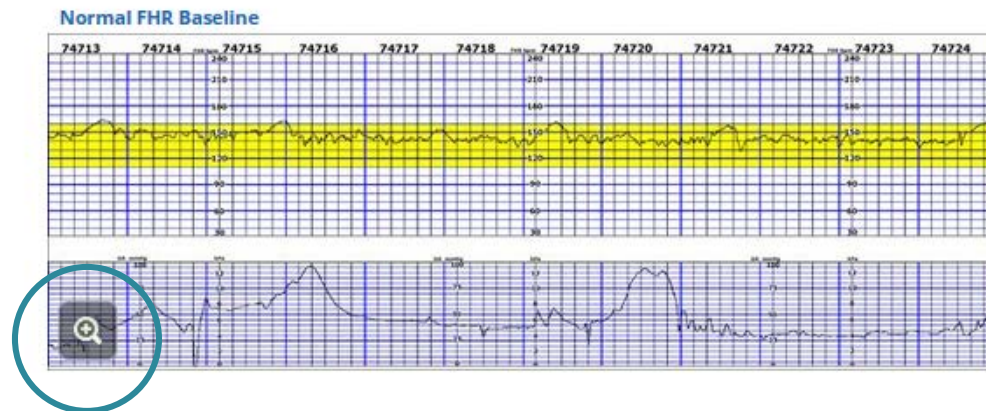
- ☐ A. two accelerations in 20 minutes that are equal to or greater than 15 bpm and last greater than 15 seconds from the onset to the return to the FHR baseline.
- ☐ B. two accelerations in 20 minutes that are equal to or greater than 10 bpm and last greater than 10 seconds from the onset to the return to the FHR baseline.

Check My Answer

- The review questions provide the learner with the opportunity to further reinforce the education while preparing the participant for the final Post Test

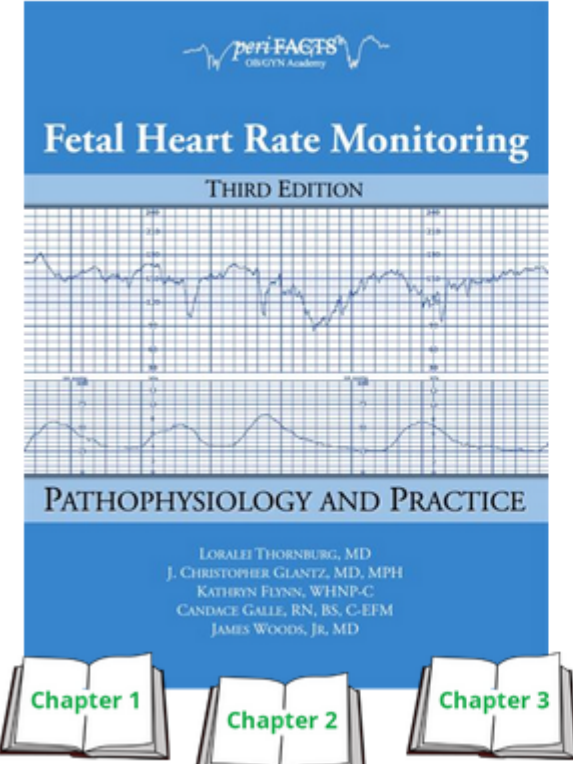
Review Tracings

Fetal Heart Rate Assessment



- Fetal heart rate strip interpretation is incorporated throughout the program, is presented in American-scale, and provides the learner with the ability to zoom

Further Review Access



Further Review

For further information regarding extrinsic factors, review our textbook, *Fetal Heart Rate Monitoring: Pathophysiology and Practice*, or click on the chapter icons on the lower left to view our textbook.

- Each part includes free access to the periFACTS® *Fetal Heart Rate Monitoring* textbook for further topic review and reinforcement
- \$59 value!

Keyword Review

Keywords for Understanding Acidosis

Acidosis: Increase in hydrogen ions in the tissue.

Acidemia: Increase in hydrogen ions in the blood.

Hypoxia: Decrease in oxygen content in the tissue.

Hypoxemia: Decrease in oxygen content in the blood.

Metabolic Acidosis (pure): Usually normal PCO_2 , decrease in HCO_3^- , more negative base excess.

Respiratory Acidosis (pure): Increase in PCO_2 , HCO_3^- acutely elevated but would normalize over time if chronic.

Mixed Acidosis: Increase in PCO_2 , decrease in HCO_3^- , more negative base excess.

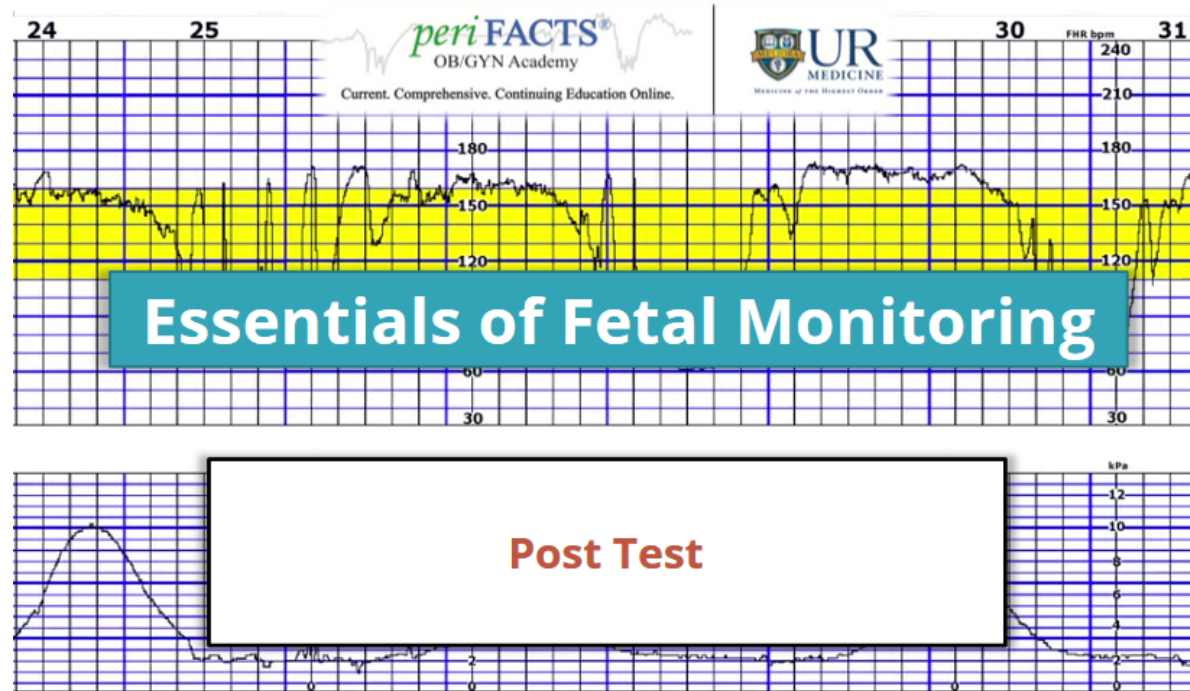


Remember: A reactive FHR tracing for a fetus is defined as:

- **32 weeks' gestation or greater:** Two accelerations in 20 minutes that are equal to or greater than 15 bpm and lasting greater than 15 seconds from the onset to the return to the FHR baseline.
- **Less than 32 weeks' gestation:** Two accelerations in 20 minutes that are equal to or greater than 10 bpm and lasting greater than 10 seconds from the onset to the return to the FHR baseline.

- Key terminology is reviewed throughout the program for continued topic reinforcement

Post Test



- After successful completion of Parts 1-3, the participant can start the Post Test

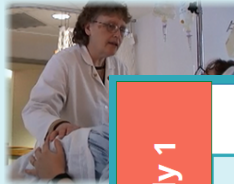
Post Test: Clinical Case Example

Clinical Case Study 1

F.N. is a 21-year-old, G1 P0000 woman at 40 2/7 weeks' gestation who presents to your labor and delivery unit with a complaint of painful uterine contractions. They started as menstrual-type cramps at approximately 0650 hours this morning. F.N. reports that her fetus is active. She denies loss of fluid and vaginal bleeding.

F.N.'s current pregnancy has been uncomplicated.

F.N.'s past medical history includes seasonal allergies and gastroesophageal reflux disease (GERD). F.N.'s daily medications include a prenatal vitamin, famotidine 40 mg, and cetirizine 10 mg. All prenatal testing has been normal, including negative group B *Streptococcus* testing.



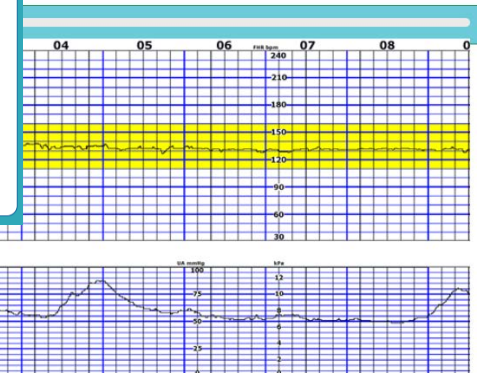
Clinical Case Study 1

[View the FHR Tracing](#)

1. Reviewing columns 01 through 30, F.N.'s uterine contractions are described best as:

- ☐ A. every two to four minutes, lasting 70 to 140 seconds, with intensity to be determined by palpation.
- ☐ B. every one to two minutes, lasting 70 to 80 seconds, with a peak intensity of 100 mmHg and a baseline uterine tone of 20 mmHg.
- ☐ C. every three minutes, lasting 50 to 60 seconds, with a peak intensity of 100 mmHg and a baseline uterine tone of 50 mmHg.
- ☐ D. every one and one-half to two and one-half minutes, lasting 80 to 100 seconds, with intensity to be determined by palpation.

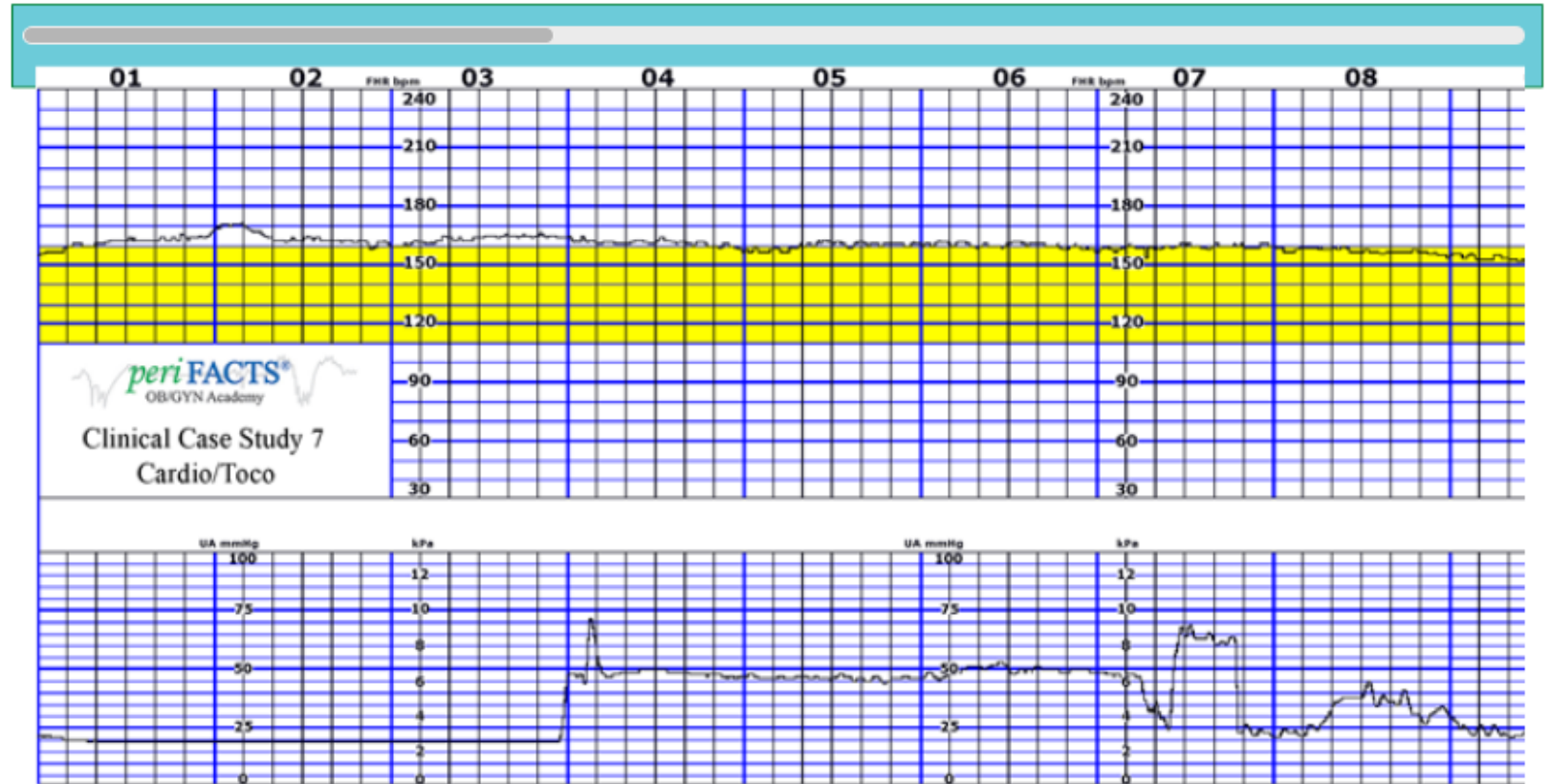
[Check My Answer](#)



[Go Back](#)

- The Post Test includes 12 clinical case studies, each with individual FHR tracings for interpretation and corresponding test questions

Post Test: FHR Tracing Example



Post Test: Question Example

Clinical Case Study 7

[View the FHR Tracing](#)

1. Reviewing columns 25 through 48, M.C.'s uterine contractions are described best as:

- ☐ A. every one to two minutes, lasting 70 to 80 seconds, with intensity of 30 mmHg to 40 mmHg above a baseline uterine resting tone of 20 mmHg.
- ☐ B. every one and one-half to two and one-half minutes, lasting 60 to 110 sec, with an intensity of 20 mmHg to 50 mmHg above a baseline uterine resting tone of 40 mmHg.
- ☐ C. Every one and one-half to two and one-half minutes, lasting 60 to 110 sec, with intensity to be determined by palpation.

[Check My Answer](#)

- Each clinical case and FHR tracing in the post test includes test questions that reinforce the essentials of fetal monitoring while incorporating critical thinking and FHR interpretation for the learner

Certificate of Completion



- Immediately upon successful completion of the post test with a score of 80% or higher, the learner will be provided with a certificate of completion
- 20 Contact Hours (100% EFM, 25% Pharmacology) and 20 CME Credits are available

Questions?

Contact us!

- periFACTS® OB/GYN Academy
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- 1-800-285-2366 (toll-free)
- 585-273-1975 (direct)



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