

## HRV Instrumentation

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### Test Introduction

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### Question 1

[Generic Parent » HRVB Tutor](#)

1 pt

When you cannot detect a strong BVP signal from the fingers, you should consider a \_\_\_\_\_ placement.

- A. thumb
- B. toe
- C. brachial artery
- D. vertebral artery

**Question Type:** *Multiple Choice***Randomize Answers:** Yes**Date Added:** *Thu 20th Jun 2019***Last Modified:** *N/A***QID#:** *17,096,251*

#### **Correctly answered feedback**

When you cannot detect a strong BVP signal from the fingers, you should consider a thumb placement.

#### **Incorrectly answered feedback**

When you cannot detect a strong BVP signal from the fingers, you should consider a thumb placement.

## Question 2

*Generic Parent » HRVB Tutor*

1 pt

What does a photoplethysmograph (PPG) sensor measure?

- A. relative blood flow
- B. absolute blood flow
- C. peripheral temperature
- D. venous tone

**Question Type:** Multiple Choice

Randomize Answers: Yes

Date Added: Thu 20th Jun 2019

Last Modified: Thu 20th Jun 2019

QID#: 17,096,257

**Correctly answered feedback**

A photoplethysmograph (PPG) sensor measures relative blood flow.

**Incorrectly answered feedback**

A photoplethysmograph (PPG) sensor measures relative blood flow.

## Question 3

*Generic Parent » HRVB Tutor*

1 pt

Which is an advantage of BVP recording over ECG recording?

- A. no skin preparation
- B. faster sensor attachment
- C. no clothing removal
- D. all of these choices are correct

**Question Type:** Multiple Choice

Randomize Answers: Yes

Date Added: Thu 20th Jun 2019

Last Modified: N/A

QID#: 17,096,316

**Correctly answered feedback**

Three advantages of BVP recording over ECG recording are faster sensor attachment, no clothing removal, and no skin preparation.

#### Incorrectly answered feedback

Three advantages of BVP recording over ECG recording are faster sensor attachment, no clothing removal, and no skin preparation.

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## Question 4

*Generic Parent* » Instrumentation

1 pt

How long does it take blood volume pulse (BVP) to display a response to a stressor?

- A. 0.5-2 seconds
- B. 2-3 seconds
- C. 5-10 seconds
- D. 15-30 seconds

**Question Type:** Multiple Choice

**Randomize Answers:** Yes

**Date Added:** Wed 19th Jun 2019

**Last Modified:** N/A

**QID#:** 17,090,882

#### Correctly answered feedback

Blood volume pulse displays a response to a stressor in 0.5 - 2 seconds.

#### Incorrectly answered feedback

Blood volume pulse displays a response to a stressor in 0.5 - 2 seconds.

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## Question 5

*Generic Parent* » Instrumentation

1 pt

Which is the major cause of BVP signal distortion?

- A. insufficient light
- B. movement
- C. warm room temperatures
- D. ECG artifact

**Question Type:** Multiple Choice

**Randomize Answers:** Yes

Date Added: Thu 20th Jun 2019  
Last Modified: N/A  
QID#: 17,096,195

#### Correctly answered feedback

Movement is the main cause of BVP signal distortion

#### Incorrectly answered feedback

Movement is the main cause of BVP signal distortion

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## Question 6

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1 pt

When should you expect the BVP and ECG methods to yield different HRV values?

- A. when there is marked sympathetic activation
- B. when there is marked parasympathetic activation
- C. during resonance frequency breathing
- D. when room temperature is above 74 degrees F

Question Type: Multiple Choice

Randomize Answers: Yes  
Date Added: Thu 20th Jun 2019  
Last Modified: N/A  
QID#: 17,096,327

#### Correctly answered feedback

The BVP and ECG methods yield different HRV values when there is marked sympathetic activation, because it produces vasoconstriction that decreases transit time.

#### Incorrectly answered feedback

The BVP and ECG methods yield different HRV values when there is marked sympathetic activation, because it produces vasoconstriction that decreases transit time.

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## Question 7

Generic Parent » HRVB Tutor

1 pt

When recording the ECG, use of \_\_\_\_\_ is the best way to reduce the risk of infection.

- A. permanent electrodes
- B. disposable electrodes
- C. floating electrodes
- D. precious metal electrodes

**Question Type:** Multiple Choice  
**Randomize Answers:** Yes  
**Date Added:** Thu 20th Jun 2019  
**Last Modified:** N/A  
**QID#:** 17,096,382

#### Correctly answered feedback

When recording the ECG, use of disposable electrodes is the best way to reduce the risk of infection.

#### Incorrectly answered feedback

When recording the ECG, use of disposable electrodes is the best way to reduce the risk of infection.

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## Question 8

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1 pt

Which artifact affects ECG, but not BVP, recordings?

- A. 50/60 Hz
- B. movement artifact
- C. EMG
- D. radio frequency

**Question Type:** Multiple Choice  
**Randomize Answers:** Yes  
**Date Added:** Thu 20th Jun 2019  
**Last Modified:** N/A  
**QID#:** 17,096,388

#### Correctly answered feedback

EMG artifact affects ECG recordings because it can be volume conducted to ECG electrodes.

#### Incorrectly answered feedback

EMG artifact affects ECG recordings because it can be volume conducted to ECG electrodes.

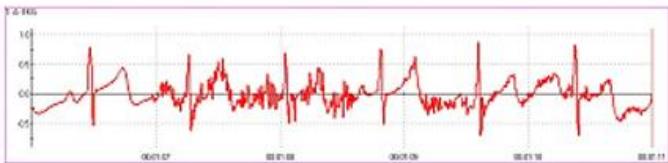
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## Question 9

Generic Parent » HRVB Tutor

1 pt



Which artifact does this screen illustrate?

- A. 50/60 Hz
- B. EMG
- C. electromagnetic interference (EMI)
- D. DC offset

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**Question Type:** Multiple Choice

**Randomize Answers:** Yes

**Date Added:** Thu 20th Jun 2019

**Last Modified:** Wed 17th Jul 2019

**QID#:** 17,096,439

#### Correctly answered feedback

This screen illustrates EMG artifact superimposed on the ECG signal. This can cause the software to see extra beats and calculate shorter interbeat intervals.

#### Incorrectly answered feedback

This screen illustrates EMG artifact superimposed on the ECG signal. This can cause the software to see extra beats and calculate shorter interbeat intervals.

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## Question 10

*Generic Parent* » HRVB Tutor

1 pt

You should be concerned about starting HRV biofeedback training if your patient's ECG indicates

- A. arrhythmias.
- B. ischemia.
- C. prolonged QT intervals.
- D. any of these abnormalities

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**Question Type:** Multiple Choice

**Randomize Answers:** Yes

**Date Added:** Thu 20th Jun 2019

**Last Modified:** N/A

**QID#:** 17,098,633

**Correctly answered feedback**

You should be concerned about starting HRV biofeedback training if your patient's ECG indicates arrhythmias, ischemia, or prolonged QT intervals since these may signal an increased risk of mortality.

**Incorrectly answered feedback**

You should be concerned about starting HRV biofeedback training if your patient's ECG indicates arrhythmias, ischemia, or prolonged QT intervals since these may signal an increased risk of mortality.

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