Influence of horseback riding and horse simulator riding on heart rate variability: Are there differences?

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This study aimed to compare the heart rate variability (HRV) in healthy young people while riding a real horse or a horse gait simulator. The sample consisted of a group of 23 healthy young adults aged 22.91 (2.37), who rode a horse for five minutes at walking speed and spent five minutes on a horse gait simulator, while their HRV values were being recorded. Furthermore, immediately after each protocol, the HRV at rest was also recorded to observe the acute effects. We used the paired samples t-test to compare between the HRV during the horse-riding and the horse simulator-riding activities, as well as the differences in the acute effects between both situations. The findings indicate that the HRV was lower when participants were riding the horse compared with the activity on the horse simulator. However, no differences were observed immediately after the two protocols. Therefore, we state that the sympathetic tone is higher while riding a real horse than while riding a horse simulator. These differences may be due to emotional aspects and not due to differences in the physical load, considering the absence of differences in the acute effects.

Emotions

Heart rate variability

Horseback

Physical load