

Introduction

Our project studies heart rate variability of college athletes at Blue Mountain College. We will take the heart rate and VO2 max against weight of the participant. We will determine if the weight of the participant will affect the heart rate and their athletic performance using the Bruce Protocol

Methodology

The weight and resting heart rate of five college athletes will be measured before testing begins. The participants will be put through the Bruce Protocol. The heart rate is measured every three minutes of the fifteen-minute test. The participant will have a heart rate monitor, electrodes, and VO2 mask hooked up to them. The electrodes will measure the heart rate and the VO2 mask will measure their oxygen capacity. The heart rate and VO2 will be collected every three minutes of the Bruce Protocol. The statistical data will be collected and plugged into a Pearson Correlation Coefficient dot plot.

References

Kinesiology, School of. "Heart Rate Variability of Recently Concussed Athletes at... : Medicine & Science in Sports & Exercise." LWW. Accessed January 30, 2020. https://journals.lww.com/acsmmsse/Fulltext/2004/08000/Heart_Rate_Variability_of_Recently_Concussed.1.aspx.

Results

Participant 1:

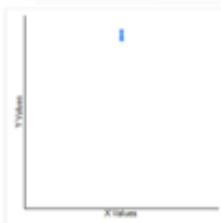
Minutes	Weight: 205	VO2
	RHR: 75	
3	HR: 95	44
6	HR: 103	44
9	HR: 108	44
12	HR: 113	45
15	HR: 120	46

Pearson Correlation Coefficient for weight vs. VO2:

Weight	VO2
205	44
205	44
205	44
205	45
205	46

Pearson Correlation Coefficient for weight vs. HR:

Weight	HR
205	95
205	103
205	108
205	113
205	120



Participant 2:

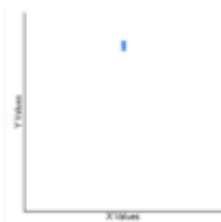
Minutes	Weight: 162	VO2
	RHR: 55	
3	HR: 60	49
6	HR: 72	50
9	HR: 85	50
12	HR: 97	51
15	HR: 100	51

Pearson Correlation Coefficient for weight vs. VO2:

Weight	VO2
162	49
162	50
162	50
162	51
162	51

Pearson Correlation Coefficient for weight vs. HR:

Weight	HR
162	60
162	72
162	85
162	97
162	100



Participant 3:

Minutes	Weight: 192	VO2
	RHR: 80	
3	HR: 82	43
6	HR: 90	43
9	HR: 98	44
12	HR: 106	45
15	HR: 115	45

Pearson Correlation Coefficient for weight vs. VO2:

Weight	VO2
192	43
192	43
192	44
192	45
192	45

Pearson Correlation Coefficient for weight vs. HR:

Weight	HR
192	82
192	90
192	98
192	106
192	115

Participant 4:

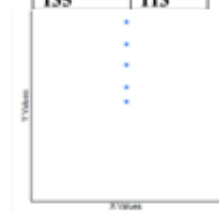
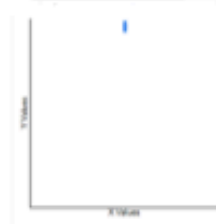
Minutes	Weight: 135	VO2
	RHR: 60	
3	HR: 63	47
6	HR: 72	48
9	HR: 86	48
12	HR: 99	48
15	HR: 113	49

Pearson Correlation Coefficient for weight vs. VO2:

Weight	VO2
135	47
135	48
135	48
135	48
135	49

Pearson Correlation Coefficient for weight vs. HR:

Weight	HR
135	63
135	72
135	86
135	99
135	113



Participant 5:

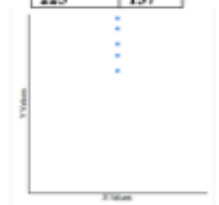
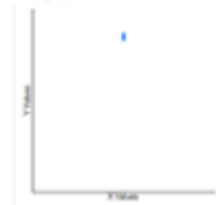
Minutes	Weight: 225	VO2
	RHR: 90	
3	HR: 96	42
6	HR: 108	42
9	HR: 117	42
12	HR: 129	43
15	HR: 137	43

Pearson Correlation Coefficient for weight vs. VO2:

Weight	VO2
225	42
225	42
225	42
225	43
225	43

Pearson Correlation Coefficient for weight vs. HR:

Weight	HR
225	96
225	108
225	117
225	129
225	137



Conclusion

The study showed that the weight of each participant affected the heart rate and VO2 of the normal college athlete. The