



Heart Zones Research Program: Determining the Ideal Configuration

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Abstract:

Heart rate monitors are extraordinary training tools for assessing cardiovascular fitness. Recent advancements include innovations that allow for simultaneous heart rate monitoring of large groups of subjects at one time. To this end, Heart Zones™ has tremendous potential to enhance programs. The Heart Zones™ System is an innovative application; however, there is a need to improve the system's configuration. Specifically, preliminary tests found that signal interruptions were prevalent resulting in missing data. We examined the relationship between signal interruption and the WASP/Bridge device to determine if the (a) height; (b) angle; and (c) location; and (d) number of WASP/Bridges played a role in signal interruption. Students enrolled in an undergraduate KINESIOLOGY program wore the SCOSCHE RHYTHM+ sensor Armband Blink Heart Rate monitor during normal class activities. The height, angle, and location of the WASP/Bridge device did play an important role in signal interruption. Two WASP/Bridge devices were better than one and this was especially true when the whole space was utilized regardless of the number of users at one time. Further testing is needed to assess the strength of the association between the number of participants; the size of the activity boundaries, and the density of users (i.e., the number of users per square foot) and signal interruption. Future studies should be conducted in similar gymnasiums to determine if the findings in South Gym are replicable.