

Summary

Zone Fit Ltd received funding from The Sporting Chance Initiative to employ the services of Robert Gordon University (RGU) to scientifically measure and compare biomechanical movements, heart rate activities and the amount of calories burnt. Comparisons were made between a step apparatus at the lowest height setting (one riser either side), using no equipment, using The Fit Zone™ at ground level and using The Fit Zone™ at height setting 2 (115mm).

A previous study undertaken by RGU to measure heart rate activities and calories burned in a 45 minute trial class over a period of 6 weeks validated that our product was effective for heart rate training and a fun alternative to other group exercise programmes. However, a more controlled study was identified to compare heart rate activities using the exact same variables - choreography, speed and duration. RGU's research proposal and the results of their research are available on request.

The information in this report is taken from an analysis of the data collected for RGU. Information was obtained from 31 fit and active volunteers.

Step has been around since the early 80s and is a well established product in the fitness market. By commissioning this study, we wished to validate our product as an effective alternative to step, whilst still burning a significant amount of calories. We also wish to validate our license free group exercise programme to show how long people exercise effectively using industry identified guidelines.

Conclusions

Based on every volunteer participating in 10 minutes of exercise activity after a 5 minute warm up and using the exact same variables (speed, choreography, polar team heart rate monitors and workout environment), we conclude the following:

Overall, participants worked longer in moderate to maximum heart rate training zones and burned more calories using The Fit Zone™ at height setting 2 compared to step and using no equipment. This aligns itself to current guidelines for effective cardiovascular heart rate training. The Fit Zone™ with no height also reports strong data which is not majorly different from using a step apparatus at its lowest height setting, but significantly different from using no equipment at all.

Description	FZ No Height	FZ Height 2	Step Lowest Height	Floor
Avg % HR for duration of the activity	83%	85%	85%	81%
Calories Burned	74	77	75	70
Overall Average Time in Mod to Max Heart Rate Zones	9m 27s	9m 38s	9m 32s	8m 59s

Recommendations

The Fit ZoneTM Group Exercise Programme was developed and designed by Zone Fit Ltd to be a multi-level cardiovascular exercise programme easily adapted for different fitness and functional levels and environments. The data from the Polar software has validated the training effect and as such we have no further recommendations for improving the programme at this stage of the product's development. We believe the group exercise programme to be ready for market acceptance. However, the equipment needs redesigned based on extensive testing and feedback - although the working area and height settings will not change. The functionality of adding height will be addressed as per the remit of our patent application.

Further Research

We would like to commission a further study analysing the movement mechanics using the different height settings of The Fit ZoneTM to see if it has any major effects on recruiting more or different muscle fibres.

