LESS VOLUME IN THE SAME HIGH INTENSITY FUNCTIONAL TRAINING WORKOUT LED TO FASTER REPETITION COMPLETION RATES, SHORTER BREAKS AND TRANSITIONS

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INTRODUCTION

- High intensity functional training (HIFT) is composed of measurable and foundational movement patterns organized into multifarious structures to create systemic challenges that target multiple fitness adaptations throughout the body (1, 3). Whether the workout is task or time oriented, the goal remains to complete the most amount of work as quickly as possible (2). However, because every workout may be drastically different, it is unclear how each prescription detail affects the workout stimulus.
- Early studies often reported similar post-exercise intensity descriptors (e.g., heart rate, blood lactate, perceived exertion) across a variety of HIFT workouts (3), but without any discernable patterns. Compared workouts shared very few programming similarities, intensity almost always fell into the "vigorous" category, and the amount of complete work was never quantified or equated. Still, the lack of fair comparisons is less the consequence of poor research design and more of an illustration of the difficulty in equating different HIFT workouts.
- For instance, even when Toledo and colleagues (2023) attempted to equate volume and examine physiological responses, workout design, repetitions completed, and/or exercise duration were still different between workouts and across individuals (4). The differential outcomes in perceived exertion and lactate seen in men and women between workouts could not be explained by any single factor. To isolate contributing factors, protocols must limit variation to one or two elements. Although prescribing more work will obviously affect duration, it is unclear how the same movements performed at different volumes affect effort.

PURPOSE

Examine the effect of volume on pacing during HIFT

METHODS

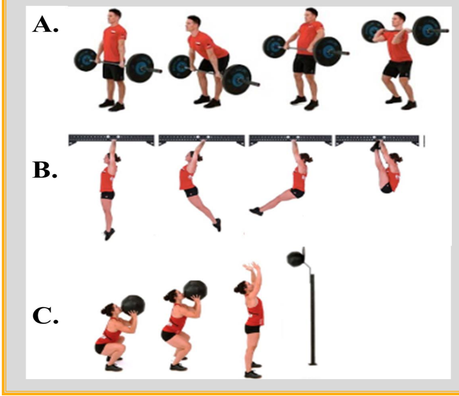
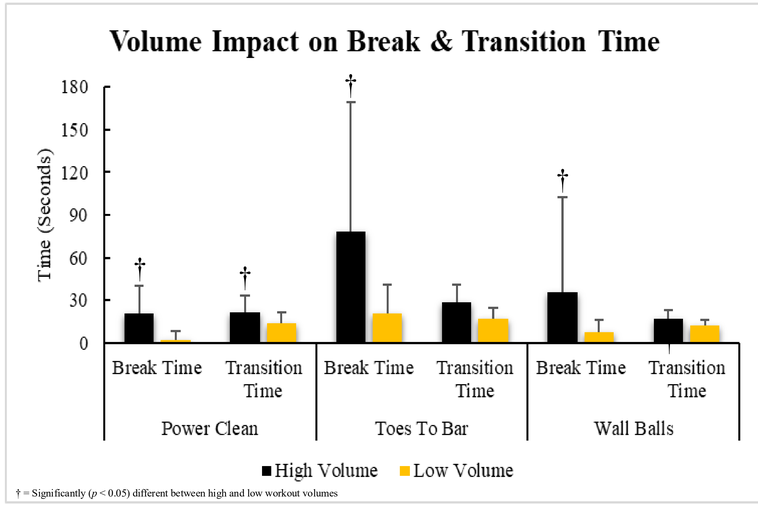


Figure 1. The HV & LV Workouts
Participants completed five rounds of **(A.)** power cleans (LV = 5; HV = 10; men = 115 lbs. [52.2 Kg]; women = 75 lbs. [34.0 Kg]), **(B)** toes to bar (LV = 10, HV = 15), and **(C)** wall balls (LV = 15; HV = 20; men = 10 ft [3.05 m], 20 lbs. [9.07 Kg]; women = 9 ft [2.74 m], 14 lbs. [6.35 kg]) while maintaining previously described movement standards (2).

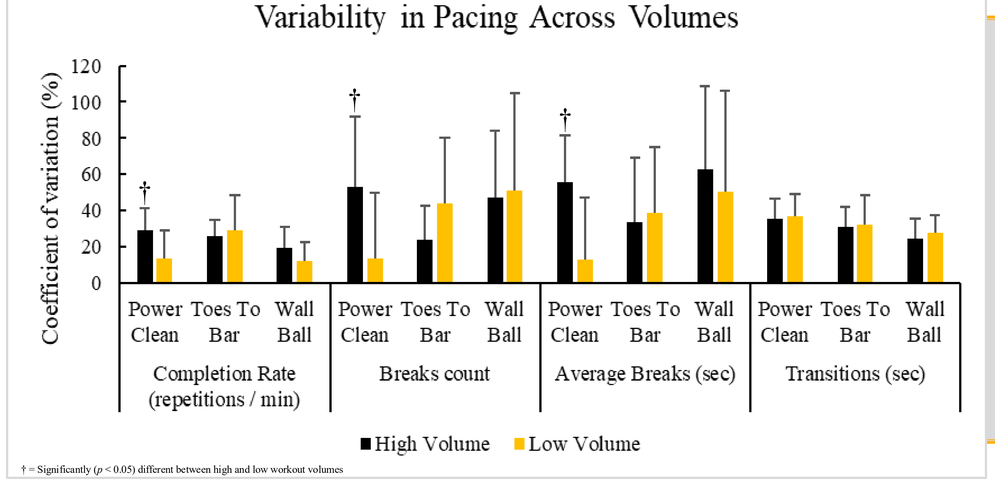
Participants	Men (27.6 ± 7.6 years, 177 ± 8 cm, 83.6 ± 7.5 kg)
	Women (25.8 ± 7.8 years, 169 ± 6 cm, 74.5 ± 13.1 kg)
	> 6 months of HIFT experience
Study Design	Two experimental workouts that differed in repetition volume only
	Participants maintained their normal dietary and training habits
	Avoided vigorous physical activity for 24 hours prior
Workout Analysis	Performed with each variable: repetition completion rate, average breaks, transition time
	Coefficient of variation (CV, %) calculated by dividing standard deviation by average

RESULTS



Repetition Completion Rate
- HV (11.8 ± 4.0 repetitions per minute) vs. LV (15.7 ± 5.5 repetitions per minute)
- Power cleans (+76%), toes-to-bar (+63%), wall balls (+19%), and rounds (+33%) were faster during LV.

Breaks & Transitions
- Fewer and shorter breaks and shorter transitions during LV.
- Similar outcomes were observed in breaks and transitions over the entire round.



Overall repetition rate
- Faster in LV compared to HV
- This extended to each exercise and round.
- **Power Clean**
- Variability in rate and breaks were more consistent during LV.
- **No other differences were observed.**

CONCLUSIONS & PRACTICAL APPLICATIONS

These findings support the hypothesis that higher workout volume is associated with slower pacing. When performing lower volume, athletes demonstrated faster repetition rates, took fewer and shorter breaks, and transitioned faster between all three movements. Additionally, power clean repetition rates and rest intervals exhibited greater consistency during the low-volume workout. These data are useful for coaches and athletes when developing pacing strategies. Knowing that decreasing volume of a familiar HIFT workout will affect pacing across all exercise components, with consistency in one key exercise being affected the most, may help athletes effectively tailor their pacing to match the intended stimulus or outsmart competitors.

REFERENCES

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