



Chest binding and physical function during maximal exercise

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Despite common health and community recommendations to not bind during exercise, to our knowledge, there is currently no research exploring the impact of chest binders on maximal physical function.

Methods

21 binder naive participants (mean age 30.67yrs, SD 5.41) completed 2 exercise testing sessions - 1 in usual sports attire and 1 in a binder - randomly assigned and with the tester blinded to binder allocation.

Key performance outcomes were collected during a maximal aerobic fitness test on a treadmill [aerobic fitness, perceptions] and maximal upper body muscle strength [1RM], along with pulmonary function [FEV6] at rest.

Results

Mean chest girth was 89.39cm (SD 4.52, range 81-97cm), and body fat percentage 28.67% (SD 7%, range 18-45%). There was no significant difference in any of the physiological performance outcomes or perceptions of effort ($p=.09$), comfort ($p=.06$) or breathlessness ($p=.83$) in the final stage of aerobic fitness test between conditions.

Outcome	Variable	Mean diff (95%CI)	<i>p</i>	Cohens <i>d</i>
Lung Function	FEV6	0.062 (-0.08, 0.20)	.376	0.197
Muscle Strength (1RM)	Chest Press	0.96 (-0.78, 2.70)	.263	0.251
	Lat (Back) Pull	0.64 (-0.95, 2.23)	.413	0.182
Aerobic Fitness	VO2max	0.15 (-1.07, 1.36)	.803	0.057

Conclusions

As hypothesised there was no impact of wearing a chest binder on acute physical performance across any outcomes, including both objective (e.g., VO₂) and subjective measures (e.g., perception). It is important to note that participants were binder naive, and therefore potential impacts of long term binder wearing was not assessed. We aimed to recruit a range of body compositions and chest girths, but future research should look to extend this range to consider greater variety in sizes.

The perceived inability to bind one's chest during exercise is a core barrier to physical activities. This study fills an important gap in our knowledge by providing evidence-based guidance that there is little to no impact or limitation on acute measures of physical performance when wearing a chest binder.

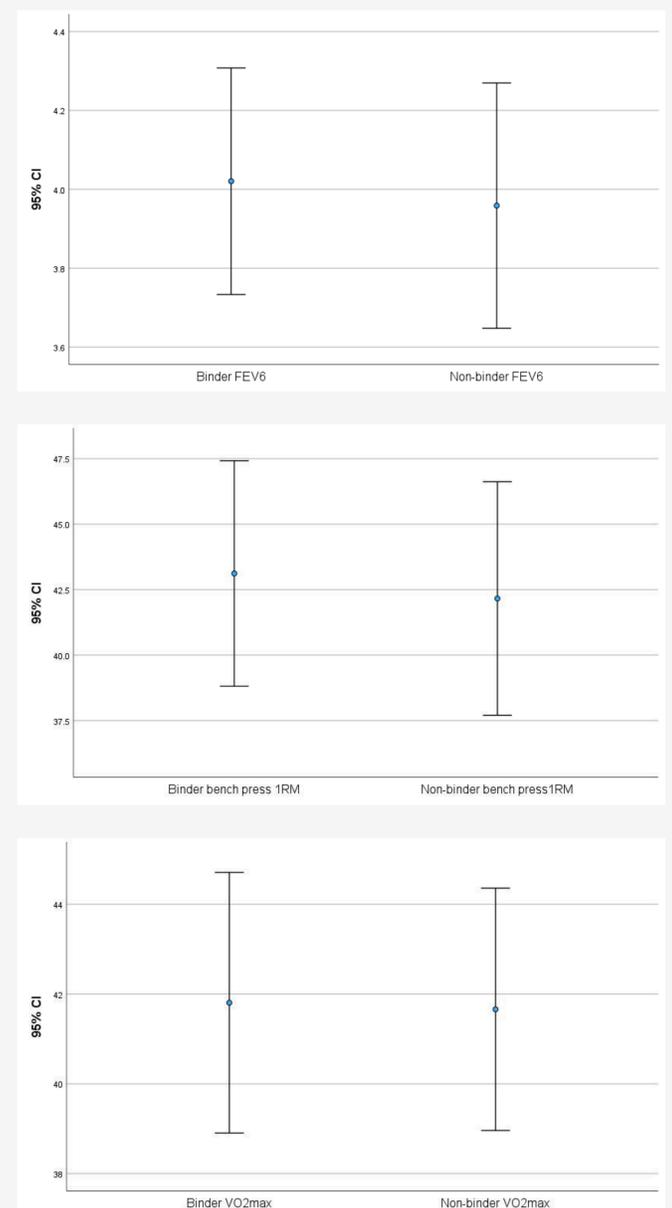


Figure 1. Box plots of key performance outcomes - lung function, chest muscle strength, aerobic fitness.