

## Correction: *Cardiopulmonary capacity and muscle strength in transgender women on long-term gender-affirming hormone therapy: a cross-sectional study*

Alvares LAM, Santos MR, Souza FR, *et al.* Cardiopulmonary capacity and muscle strength in transgender women on long-term gender-affirming hormone therapy: a cross-sectional study. *Br J Sports Med* 2022;56:1292–8. doi:10.1136/bjsports-2019-101557

Errors within the content of the article are highlighted below:

### Abstract Methods:

First sentence: “A cross-sectional study was carried out with 15 TW (34.2±5.2 years old), 15 cisgender men (CM) and 14 cisgender women (CW).”

Correct: “A cross-sectional study was carried out with 15 **non-athlete** TW (34.2±5.2 years old), 14 cisgender men (CM) and 13 cisgender women (CW).”

### Abstract Results:

First sentence: “VO<sub>2</sub>peak (L/min) was 2606±416.9”

Correct: VO<sub>2</sub>peak (**ml**/min) was 2606±416.9

### Abstract Results:

Second sentence is missing: “The VO<sub>2</sub>peak/fat-free mass (ml/kg/min) was 47.3±5.1 in TW, 53.3±8.3 in CW, and 52.4±5.8 in CM (TW vs CW p>0.05; TW vs CM p>0.05; CW vs CM p>0.05).”

### Abstract Results:

Final sentence: “The mean strength (kg) was 35.3±5.4 in TW, 29.7±3.6 in CW and 48.4±6.7 in CM (TW vs CW, p<0.05; TW vs CM, p<0.0001).”

Correct: “The mean strength (kg) was 35.3±5.4 in TW, 29.7±3.6 in CW and 48.4±6.7 in CM (TW vs CW, p<0.05; TW vs CM, p<0.0001); **however, adjusted for fat-free mass there was no difference between TW (0.6±0.1) and CW (0.7±0.9; p>0.05).**”

### Abstract Conclusion:

First sentence: “CPC in non-athlete TW showed an intermediate pattern between that in CW and CM.”

Correct: “**Absolute** CPC in non-athlete TW showed an intermediate pattern between that in CW and CM; **however, relative CPC adjusted for fat-free mass showed no difference between TW and CW or CM.**”

### Abstract Conclusion:

Last sentence: “The mean strength and VO<sub>2</sub> peak in non-athlete TW while performing physical exertion were higher than those in non-athlete CW and lower than those in CM.”

Correct: “**Similarly, the mean strength in non-athlete TW was higher than those in non-athlete CW but not when adjusted for fat-free mass.**”

### What This Study Adds

Current: “These are the first scientific data on the cardiopulmonary capacity of transgender women. The mean VO<sub>2</sub> peak of non-athlete transgender women while performing physical exertion was higher than that of non-athlete cisgender women (p<0.05) and lower than that of cisgender men (p<0.0001).”

Correct: “These are the first scientific data on the cardiopulmonary capacity of transgender women **undergoing long-term gender-affirming hormone therapy.** The **absolute** mean VO<sub>2</sub> peak of non-athlete transgender women while performing physical exertion was higher than that of non-athlete cisgender women and lower than that of cisgender men, **but there were no differences in relative VO<sub>2</sub> peak when adjusted for fat-free mass.**”

### How This Study Might Affect Research, Practice, or Policy

First bullet: “These findings could inform policy and help in decisions about the participation of transgender women in sporting activities.”

Correct: “**This study was in non-athletes and findings may not apply to policy decisions about the participation of transgender women in sporting activities.**”

**Table 2.** Comparative analysis of metabolic aspects, cardiopulmonary capacity and strength among the transgender woman, cisgender woman and cisgender man groups

	Transgender women (n=15)	Cisgender women (n=13)	Cisgender men (n=14)	Comparison	P
<b>Metabolic aspects</b>					
VO <sub>2</sub> at rest (ml/min)	328.7 (SD±75.1)	240.1 (SD±31.4)	395.8 (range 229–956)	TW x CW	**
				TW x CM	NS
				CW x CM	**
VO <sub>2</sub> AT (ml/min)	1686 (range 1144–1786)	1309 (SD±256.6)	1864 (SD±4417)	TW x CW	NS
				TW x CM	NS
				CW x CM	**
VO <sub>2</sub> RCP (ml/min)	2313 (SD±431.0)	1914 (SD±351.2)	2916 (SD±562.9)	TW x CW	*
				TW x CM	**
				CW x CM	****
VO <sub>2</sub> Peak (ml/min)	2606 (SD±416.9)	2167 (SD±408.8)	3358 (SD±436.3)	TW x CW	*
				TW x CM	****
				CW x CM	****
VO <sub>2</sub> Peak/Wgt. (ml/kg/min)	33.5 (SD±4.7)	35.7 (SD±4.7)	42.0 (range 32.3–49.2)	TW x CW	NS
				TW x CM	**
				CW x CM	**
VO <sub>2</sub> Peak/FFM (ml/kg/min)	47.3 (SD±5.1)	53.3 (SD±8.3)	52.4 (SD±5.8)	TW x CW	NS
				TW x CM	NS
				CW x CM	NS
<b>Cardiopulmonary aspects</b>					
Peak O <sub>2</sub> pulse (ml/Beat)	14.2 (SD±2.1)	11.8 (SD±2.0)	18.5 (range 12.2–22.4)	TW x CW	*
				TW x CM	****
				CW x CM	****
Maximum HR (bpm)	185.7 (SD±11.6)	177.2 (SD±6.1)	181.1 (range 164–189)	TW x CW	*
				TW x CM	NS
				CW x CM	NS
% Maximum HR predicted per age	103.1 (SD±7.3)	96.5 (SD±3.2)	99.2 (SD±3.4)	TW x CW	**
				TW x CM	NS
				CW x CM	NS
VE (BTPS) (L/min)	102.3 (SD±16.2)	87.4 (SD±10.2)	128.8 (SD±18.7)	TW x CW	NS
				TW x CM	**
				CW x CM	****
<b>Strength</b>					
				TW x CW	*
Mean strength (kg)	35.3 (SD±5.4)	29.7 (SD±3.6)	48.4 (SD±6.7)	TW x CM	****
				CW x CM	****
				TW x CW	NS
Mean strength/FFM	0.6 (SD±0.1)	0.7 (SD±0.9)	0.7 (SD±0.1)	TW x CM	*
				CW x CM	NS

## Discussion:

### Cardiometabolic aspects

Second sentence: the word “unprecedented” was removed.

Second paragraph: “Studies in sports physiology demonstrate an average difference of 25%–35% VO<sub>2</sub>peak between CM and CW,<sup>4</sup> data that were corroborated by our results. For the first time in literature, we present the VO<sub>2</sub>peak value of TW, which was intermediate between the values of the CW and CM groups.”

Correct: “Studies in sports physiology demonstrate an average difference of 25%–35% VO<sub>2</sub>peak between CM and CW,<sup>4</sup> data that were corroborated by our results. For the first time in literature, we present the absolute VO<sub>2</sub>peak value of TW, which was intermediate between the values of the CW and CM groups. Notably, relative VO<sub>2</sub> peak differences between TW and CW were not present when adjusted for FFM or body weight.”

### Conclusion:

First paragraph: “In this small cohort of non-athlete TW, who were previously exposed to male pubertal development and underwent long-term oestrogen therapy, we identified higher grip

strength and VO<sub>2</sub> peak levels than in non-athlete CW, but these same parameters were lower compared with non-athlete CM.”

**Correct:** “In this small cohort of non-athlete TW, who were previously exposed to male pubertal development and underwent long-term oestrogen therapy, we identified higher **absolute** grip strength and VO<sub>2</sub> peak levels than in non-athlete CW, but these same parameters were lower compared with non-athlete CM. **However, when adjusting for FFM, there were** no differences in **relative** VO<sub>2</sub> peak or strength between TW and CW.”

Figures (2 and 3): Settings: **VO<sub>2</sub> measurement units.**

Figure 2:

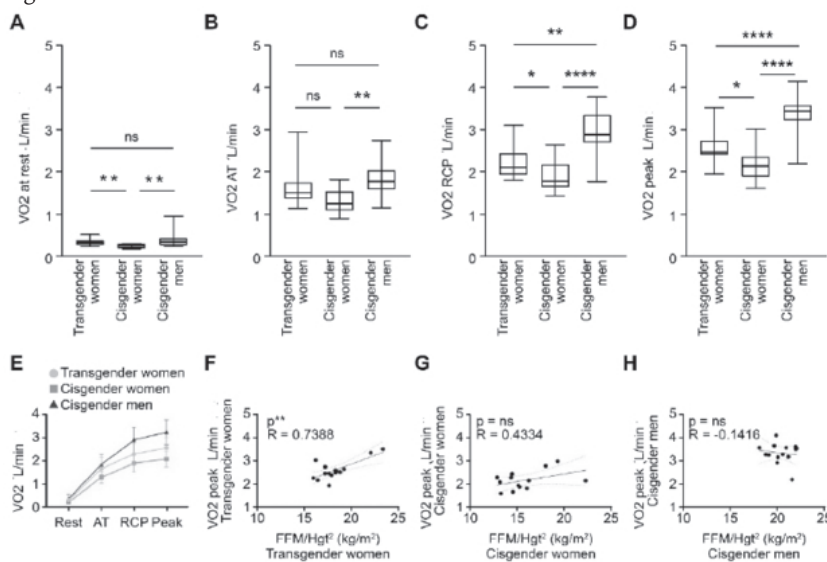
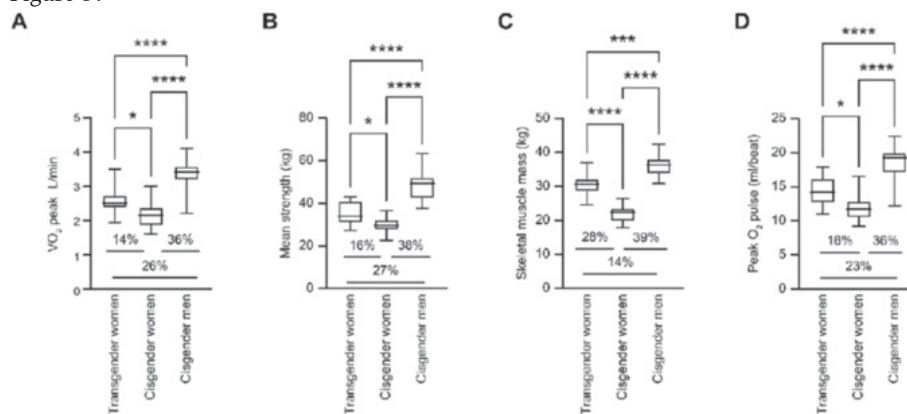


Figure 3:



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