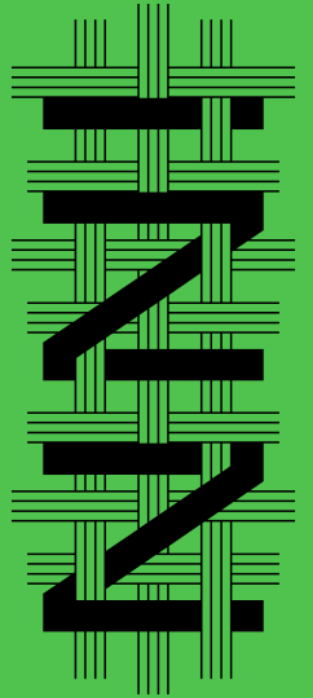




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Optimizing the high-intensity interval session through workload alterations in well-trained female and male cyclists

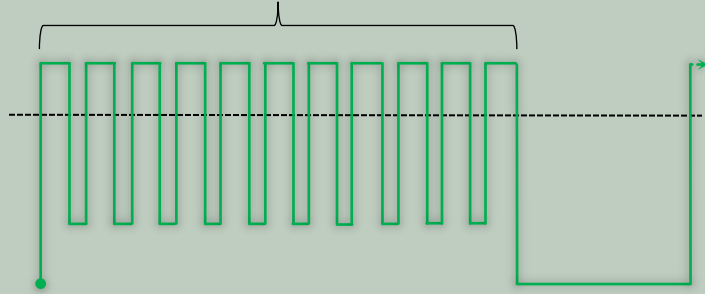
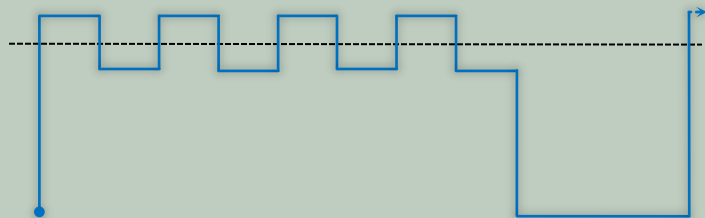
Tomas Urianstad, Ingvill Odden, Håvard Crantz Lorentzen, Knut Sindre Mølmen, Daniel Hammarström, Håvard Hamarsland, Bent R. Rønnestad

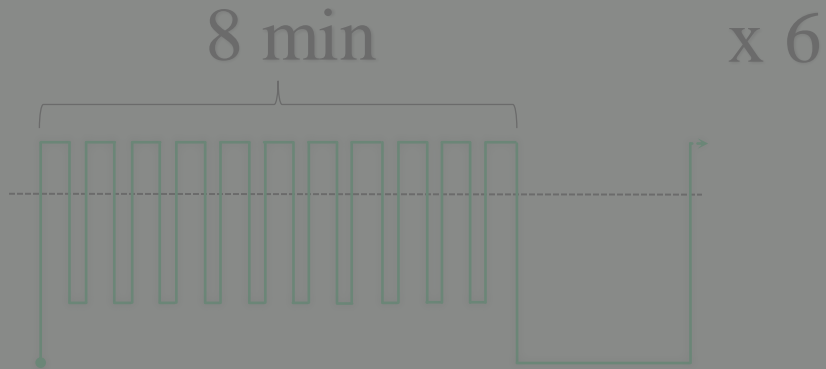


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8 min

x 6

 $\%VO_{2\max}^{\text{HIT}}$ **$86.7 \pm 10.1 \%$** Time $\geq 90\%$ of $VO_{2\max}$ **$18.7 \pm 13.1 \text{ min}$**  $\%VO_{2\max}^{\text{HIT}}$ **$85.0 \pm 10.4 \%$** Time $\geq 90\%$ of $VO_{2\max}$ **$14.7 \pm 13.0 \text{ min}$**  $\%VO_{2\max}^{\text{HIT}}$ **$85.6 \pm 10.0 \%$** Time $\geq 90\%$ of $VO_{2\max}$ **$15.3 \pm 12.4 \text{ min}$**



%VO_{2max}^{HIT}

86.7 ± 10.1 %

Time ≥90% of VO_{2max}

18.7 ± 13.1 min

What does this mean to us?

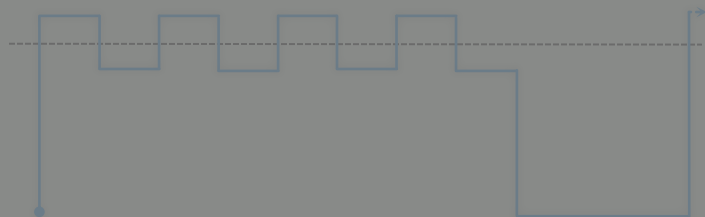


%VO_{2max}^{HIT}

35.0 ± 10.4 %

Time ≥90% of VO_{2max}

14.7 ± 13.0 min



%VO_{2max}^{HIT}

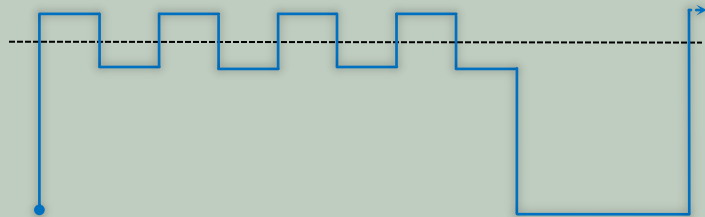
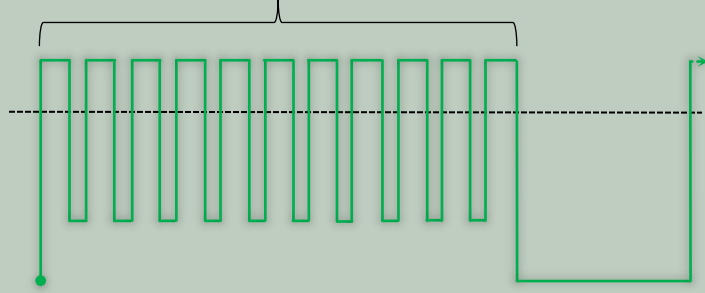
85.6 ± 10.0 %

Time ≥90% of VO_{2max}

15.3 ± 12.4 min

8 min

x 6





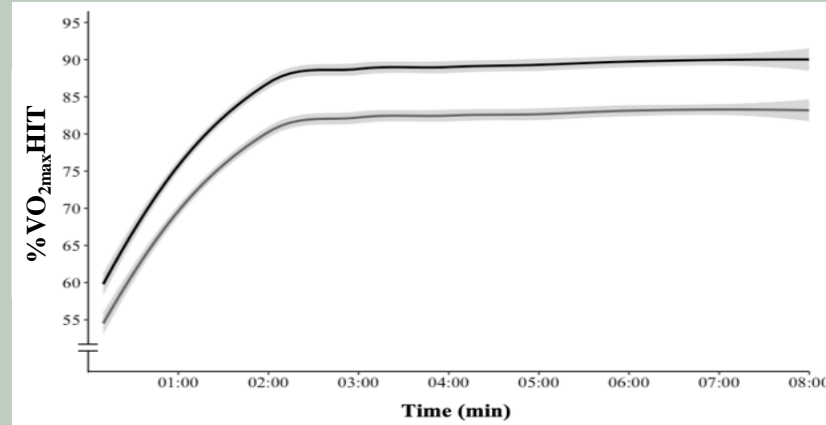
High-intensity interval training (HIT)



Is there an optimal HIT session design?

What is a god HIT session?

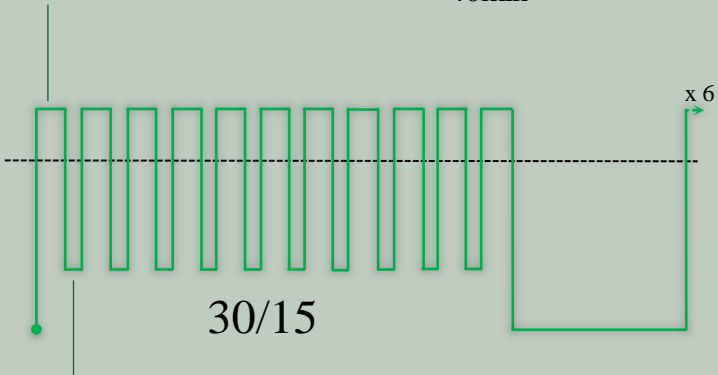




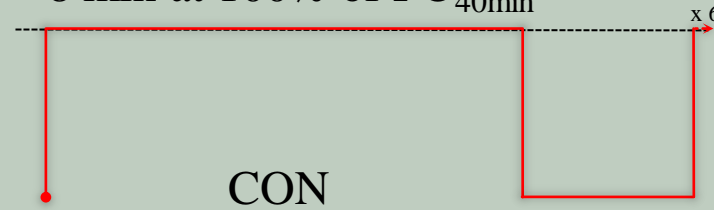
%VO_{2max} HIT

Time ≥90% of VO_{2max}

30-sec at 118% of PO_{40min}

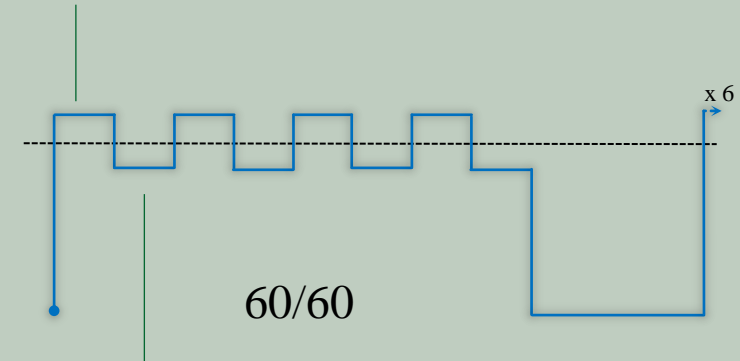


8 min at 100% of PO_{40min}



CON

60-sec at 110% of PO_{40min}



60-sec at 90% of PO_{40min}

15-sec at 60% of PO_{40min}

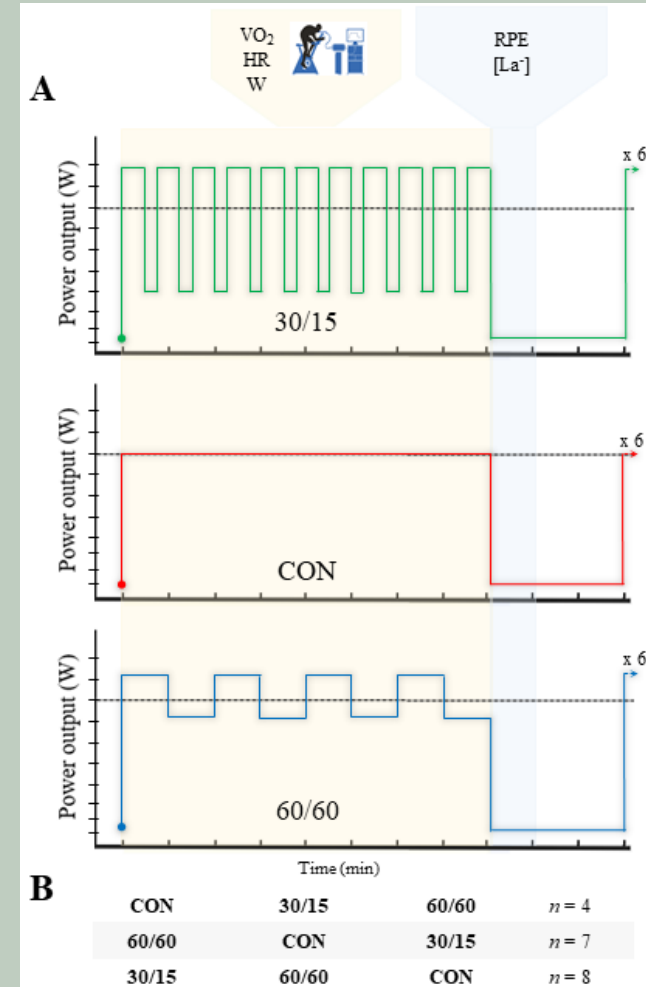




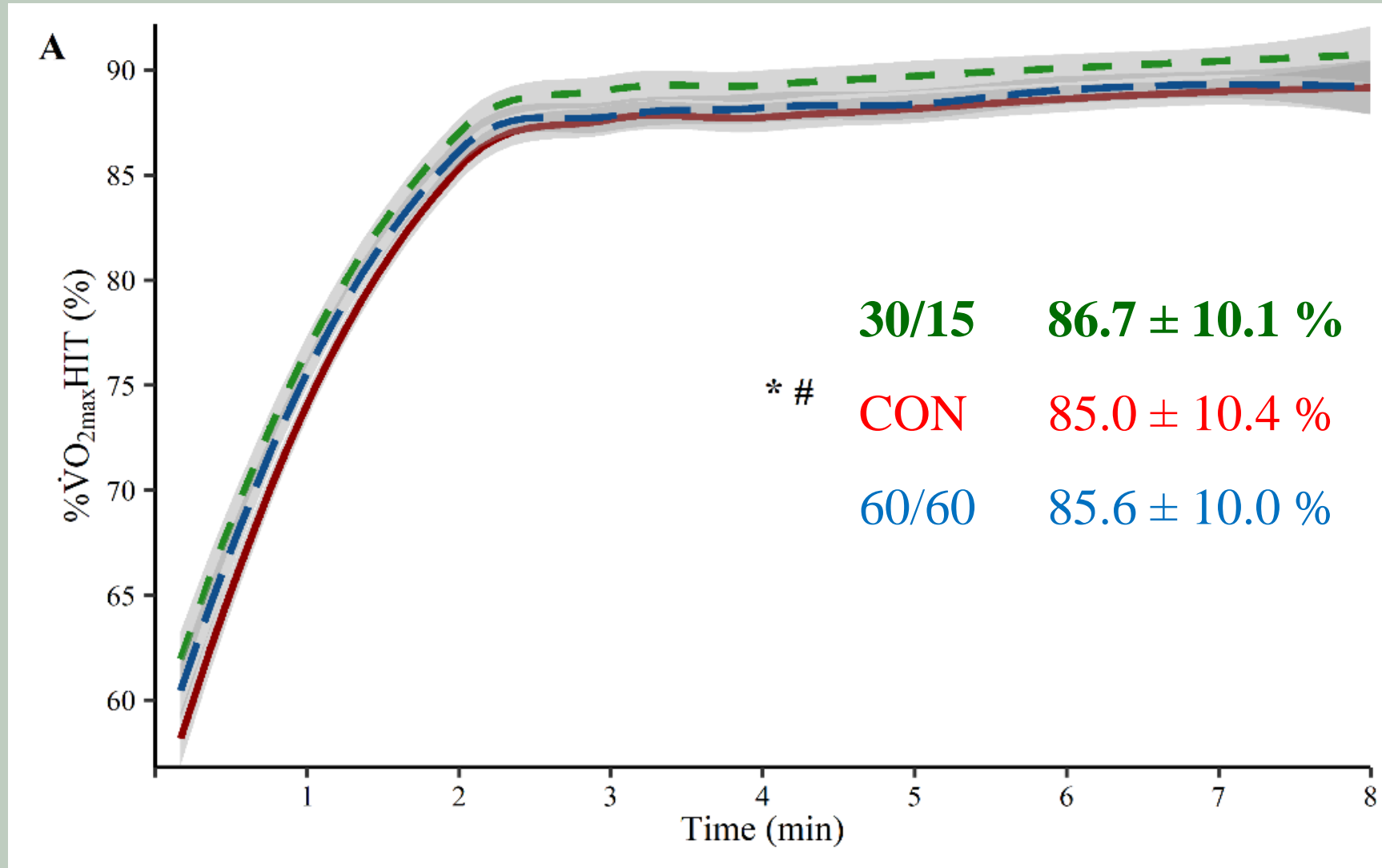
♀ n = 11
♂ n = 8

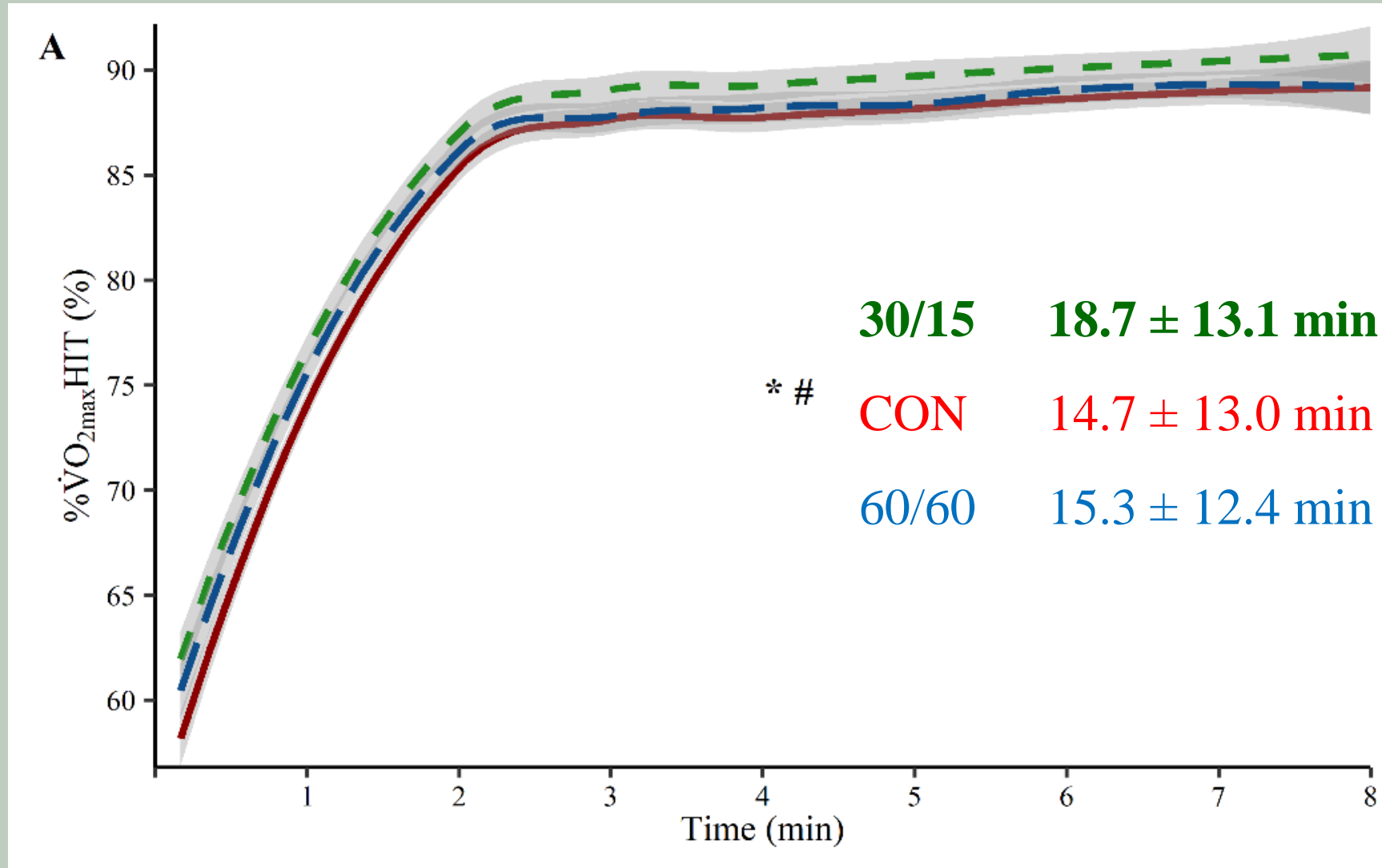


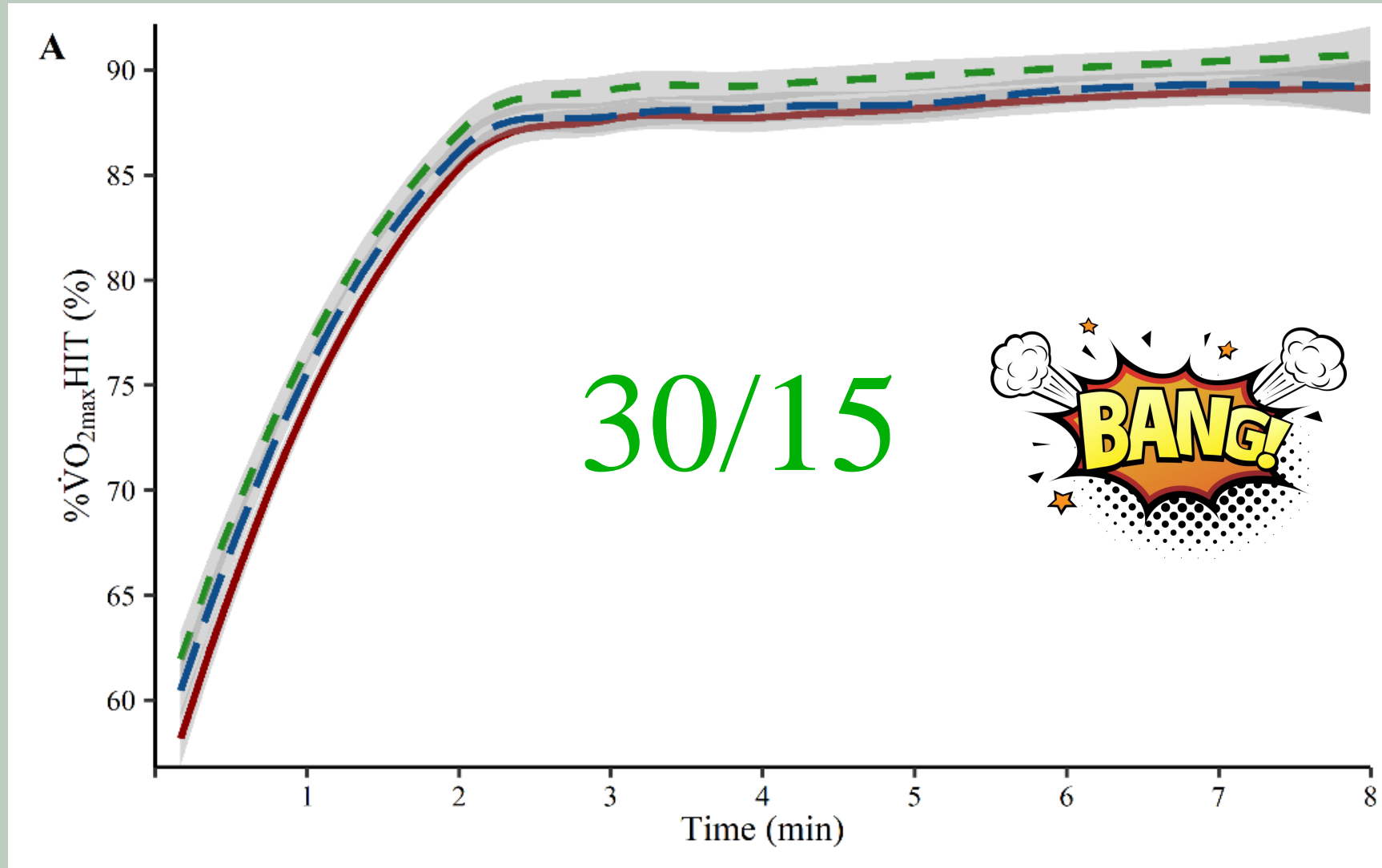
	Overall (n = 19)	Females (n = 11)	Males (n = 8)
General			
Age (years)	22.6 (4.1)	23.8 (5.0)	21.0 (1.4)
Body height (cm)	174.6 (7.8)	171.5 (8.1)	179.0 (4.8)
Body mass (kg)	66.9 (7.4)	66.6 (9.5)	67.3 (3.6)
Endurance measures			
$\dot{V}O_{2max}$ (mL·min ⁻¹ ·kg ⁻¹)	70.3 (11.0)	62.5 (6.4)	81.0 (5.2)
W_{max} (W·kg ⁻¹)	5.9 (1.0)	5.2 (0.7)	6.8 (0.4)
PO _{40min}	269 (51)	235 (27)	314 (32)



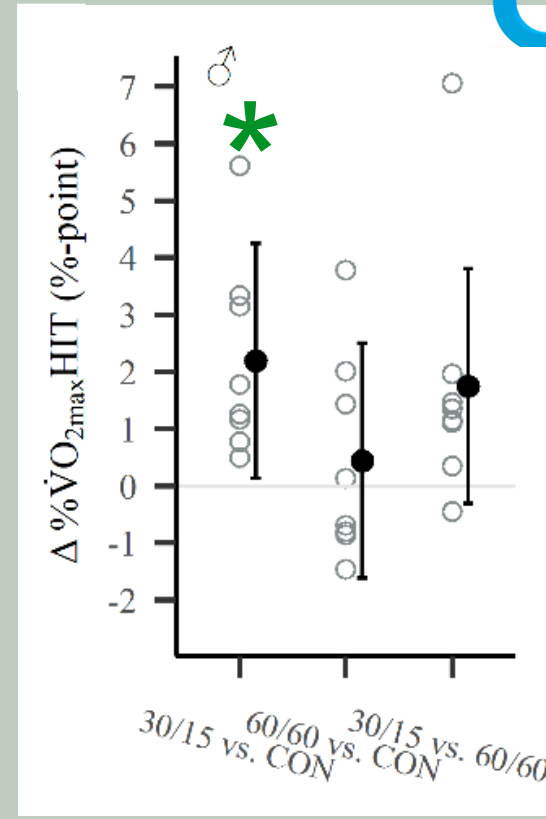
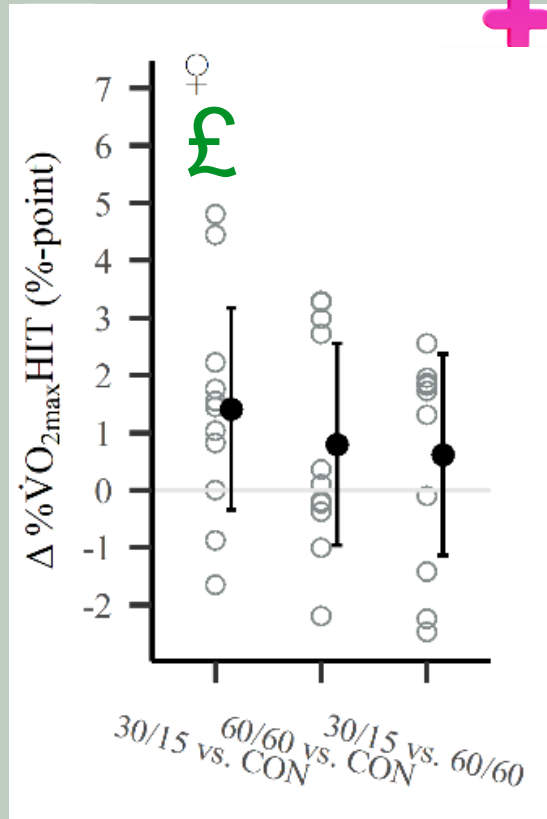
What's our main findings?



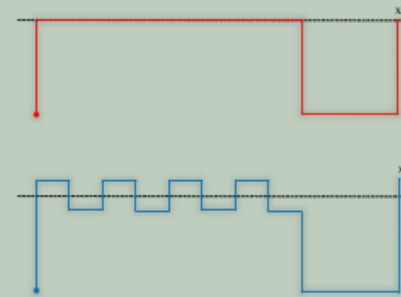
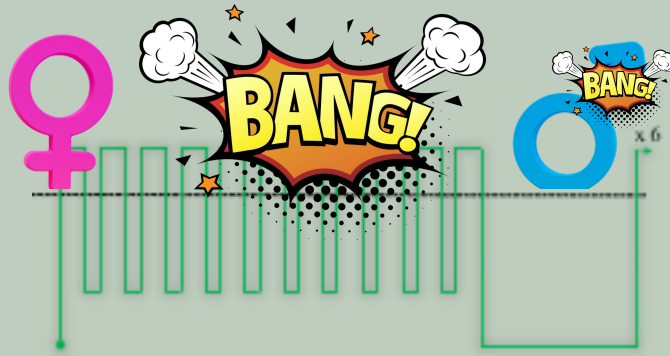




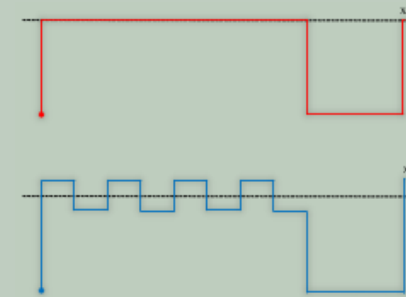
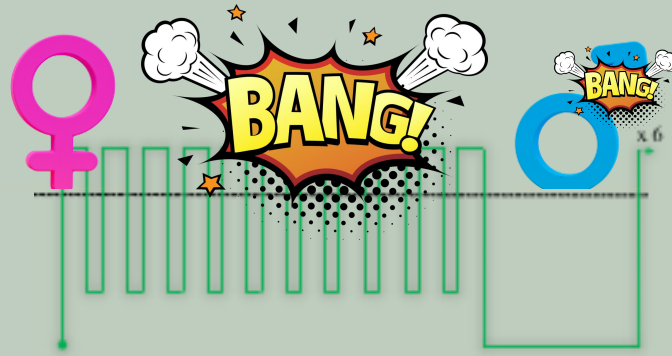
What about the impact of sex?



Let's summarize



Let's summarize



Perspectives

1st

Is it fair to judge the HIT session based on the VO₂ response?

2nd

- Greater peak mechanical work



3rd

Remember the principle of variation and individualization

Thank you for the attention

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The Trainome Research Group

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