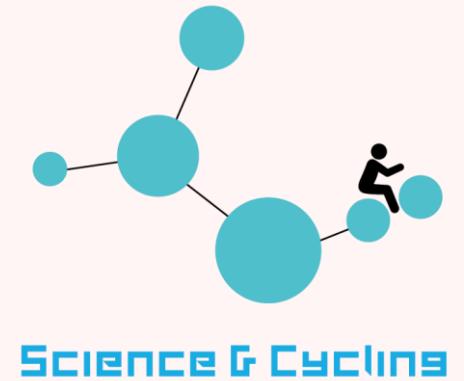




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CREATINE SUPPLEMENTATION DURING A TRAINING CAMP IN YOUNG PROFESSIONAL CYCLIST: A RANDOMIZED CONTROLLED TRIAL

Carlos Revuelta, Pedro L. Valenzuela, Lidia B. Alejo, Miguel Górriz, Itziar Pagola, Laureano M. Ozcoidi, Alejandro Lucía and David Barranco-Gil

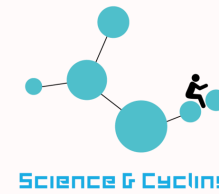
Science & Cycling

Bilbao, 28-29 June 2023

carlos.revuelta@universidadeuropea.es



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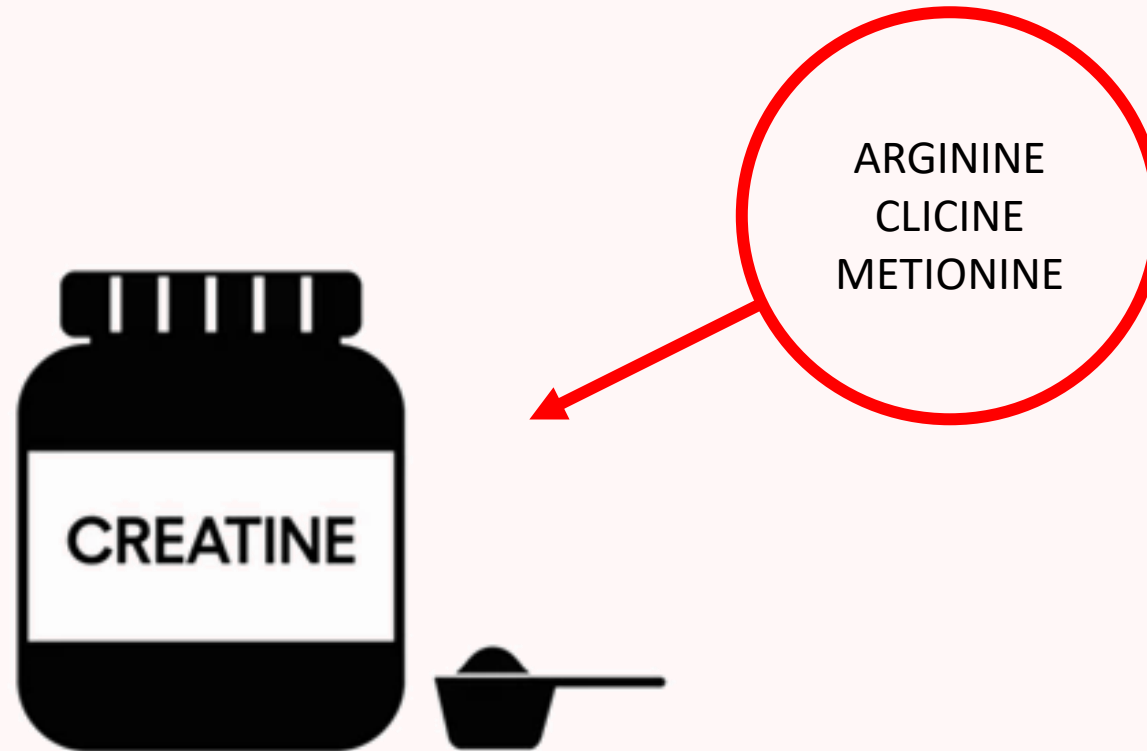


5. Poner diapo al final con hipótesis o futuras líneas

INDEX

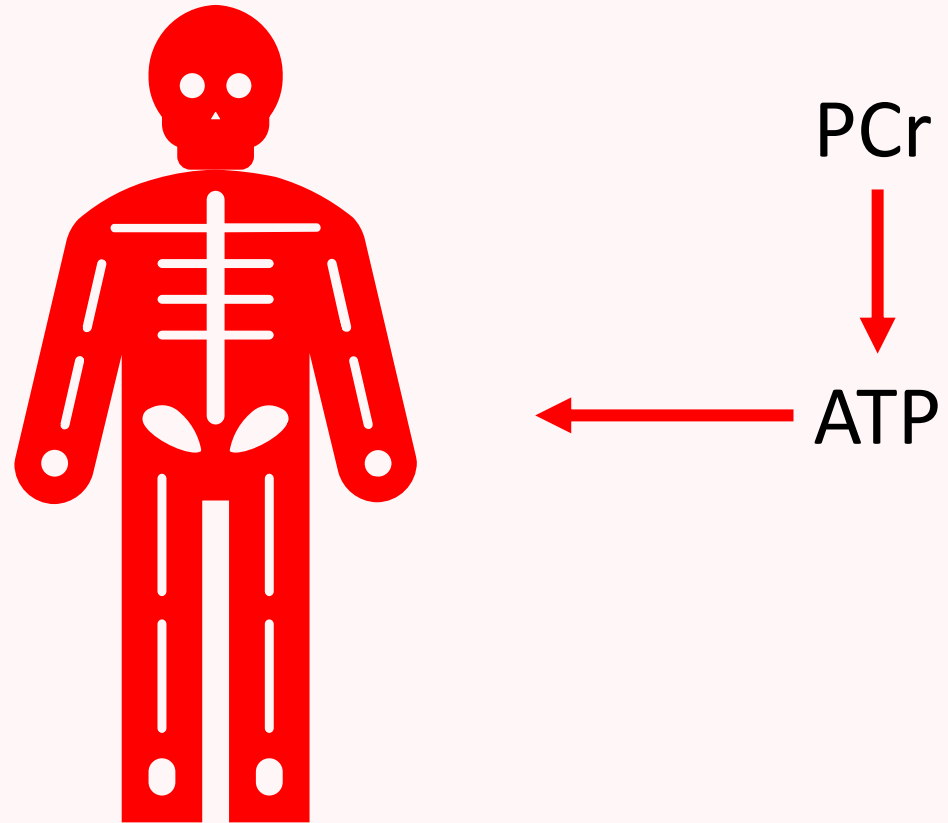
- *BACKGROUND* 3
- *METHODS* 7
- *RESULTS* 12
- *CONCLUSION* 17

BACKGROUND



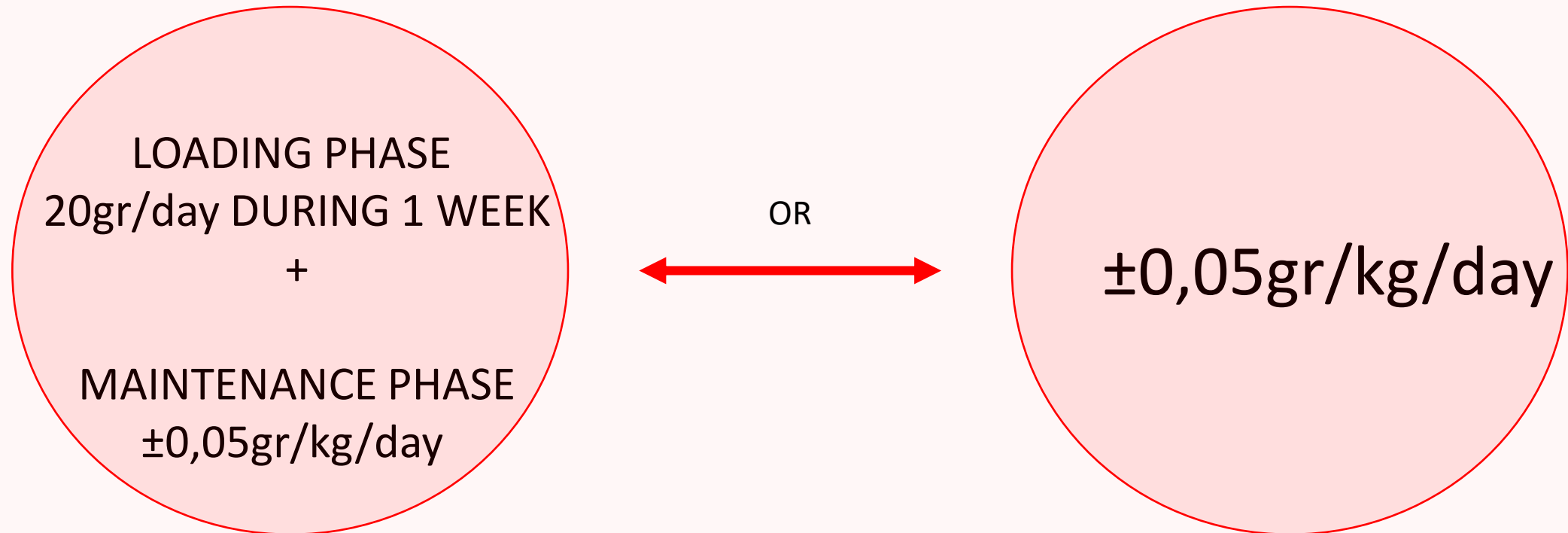
Forbes *et al.* (2023)

BACKGROUND



Forbes *et al.* (2023)

BACKGROUND



Tarnopolski (2010)

BACKGROUND

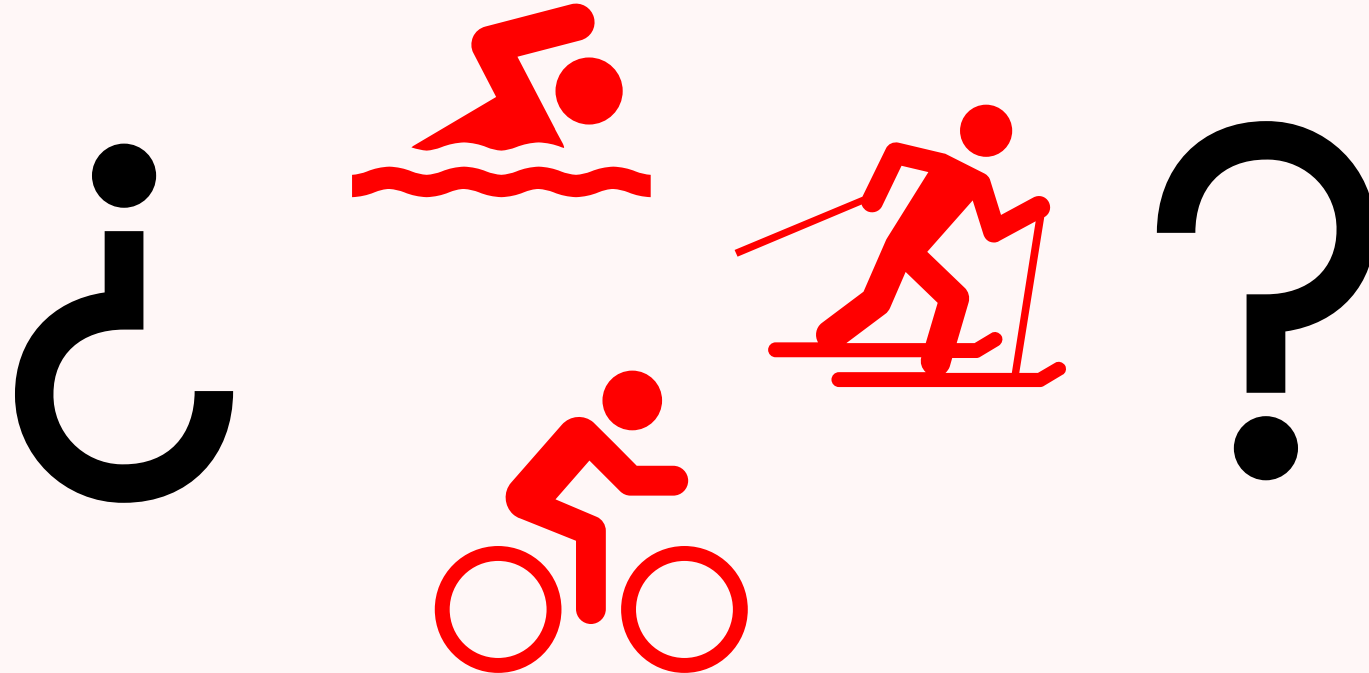
1. MECHANIC EFFECT

2. ENERGY AVAILABILITY



Wax et al. (2021)

BACKGROUND

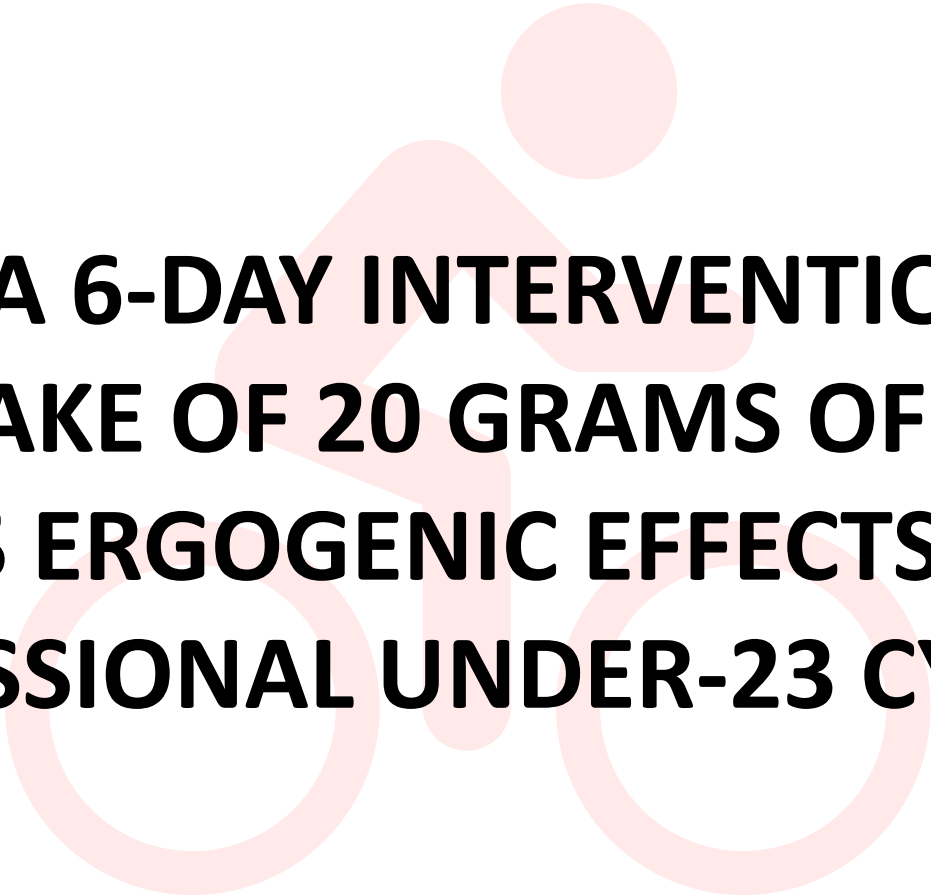


BACKGROUND

- TO INCREASE GLYCOGEN SYNTHESIS
 - TO IMPROVE RECOVERY
- TO IMPROVE TOLERANCE TO TRAINING
 - TO PREVENT INJURIES
- TO IMPROVE AEROBIC CAPACITY (ATP TRANSPORT FROM THE MITOCHONDRIA)


Kreider *et al.* (2017)


OBJECTIVE



**VERIFY IF A 6-DAY INTERVENTION WITH A
DAILY INTAKE OF 20 GRAMS OF CREATINE
HAS ERGOGENIC EFFECTS ON
PROFESSIONAL UNDER-23 CYCLISTS**

METHODS

 = **23**

 = **19±1yo**

 = **73±4,3 ml/kg/min**

**6 DAYS
TRAINING CAMP**

METHODS



N = 11

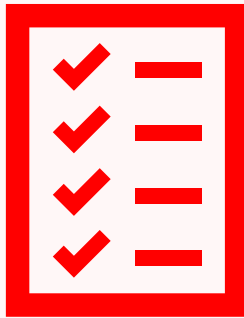
OR



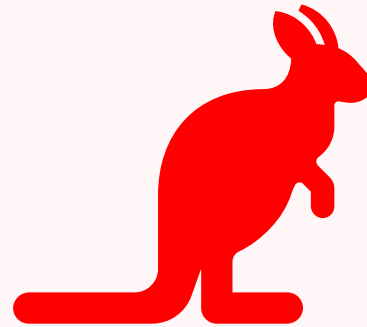
N = 12

METHODS

INDICATORS OF FATIGUE / RECOVERY



HOOPER TEST



CMJ



RESTQ

METHODS

BODY COMPOSITION



METHODS

PERFORMANCE



1'TT



6'TT



12'TT

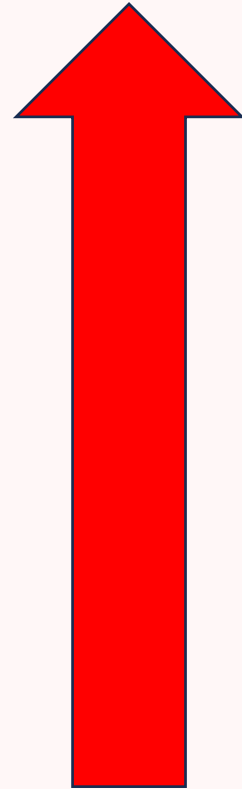


CP

RESULTS

TRAINING LOADS

(BOTH GROUPS)



+50% TRAINING TIME

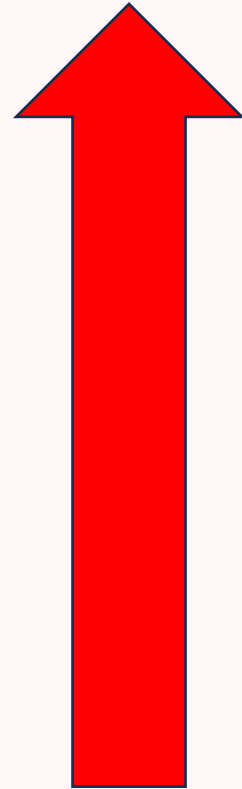
+61% TSS

(COMPARED WITH THE PRECEDING MONTH)

RESULTS

FATIGUE INDICATORS

(BOTH GROUPS)

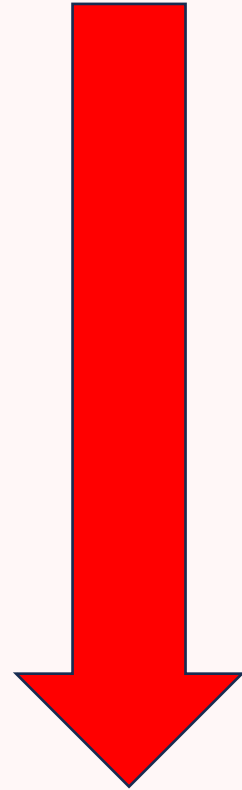


- DOMS
- FATIGUE
- TOTAL HOOPER INDEX

$P < 0.001$

RESULTS

PERFORMANCE
(BOTH GROUPS)



- **TE for CP**
P=0.020

RESULTS

GROUP BY TIME EFFECT FOR SOME RECOVERY ITEMS

$p < 0.05$

SUCCESS

SOCIAL RECOVERY

PHYSICAL RECOVERY

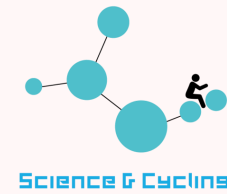
RESULTS



**BUT NO MORE DIFFERENCES BETWEEN-
GROUPS FOUNDED**



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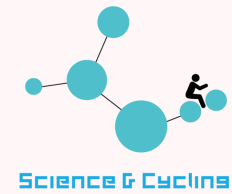


CONCLUSIONS

**“SHORT-TERM CREATINE SUPPLEMENTATION
SEEMS TO EXERT NO CONSISTENT
BENEFICIAL EFFECTS STRENUOUS TRAINING
PERIOD IN PROFESSIONAL CYCLIST”**



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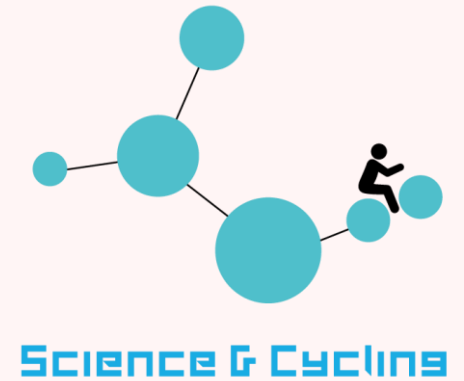


HYPOTHESIS

- 1. INTERVENTION TOO SHORT**
- 2. INSSUFFICIENT AMOUNT OF CREATINE**
- 3. COMBINATION OF BOTH...**



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