

Novel allulose amino acid-containing sugar-free beverage results in rapid ad-libitum rehydration following exercise-induced dehydration

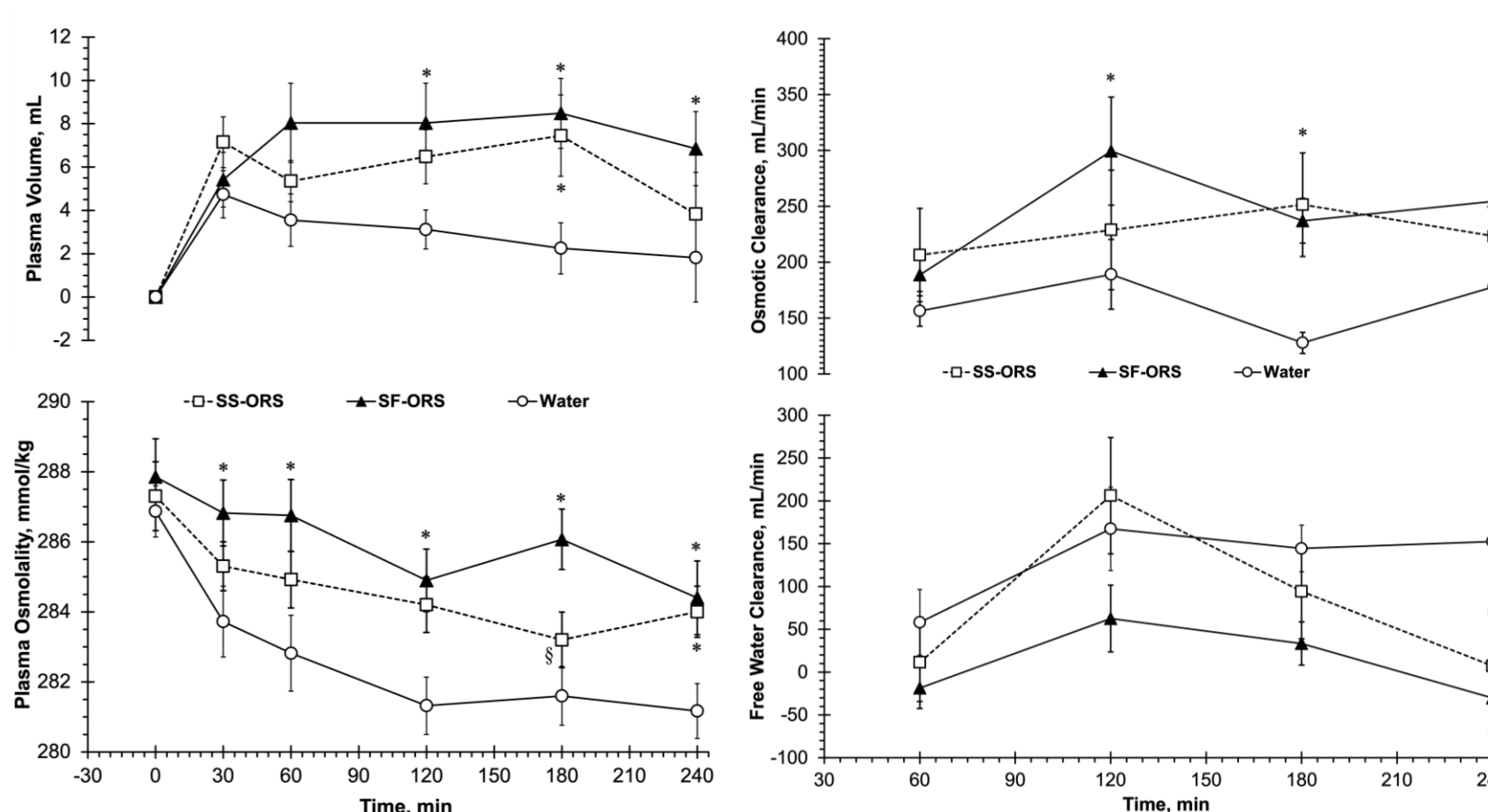
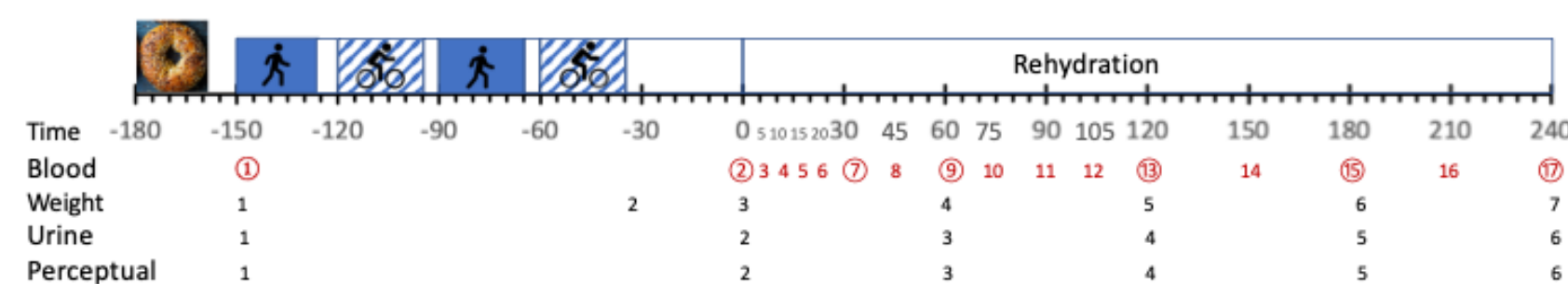
AIM

To assess the effectiveness of ad-libitum rehydration using commercially available ORS drinks sweetened with sugar or allulose.

METHODS

- 20 healthy adults (9 females; 25±4 y, 172±10 cm, 71±12 kg).
- 2 h alternating cycling/walking in heat (31 °C) at 70% age-predicted max heart rate to 2% body mass loss.
- 30 min rest → 500 mL fluid bolus → 4 h ad-libitum rehydration
- Subjects consumed (randomized crossover):
 - plain water (W)
 - sugar-sweetened ORS (SS-ORS)
 - allulose + amino acid sugar-free ORS (SF-ORS)
- All drinks contained 10 g/L D₂O to assess plasma deuterium uptake

PROTOCOL



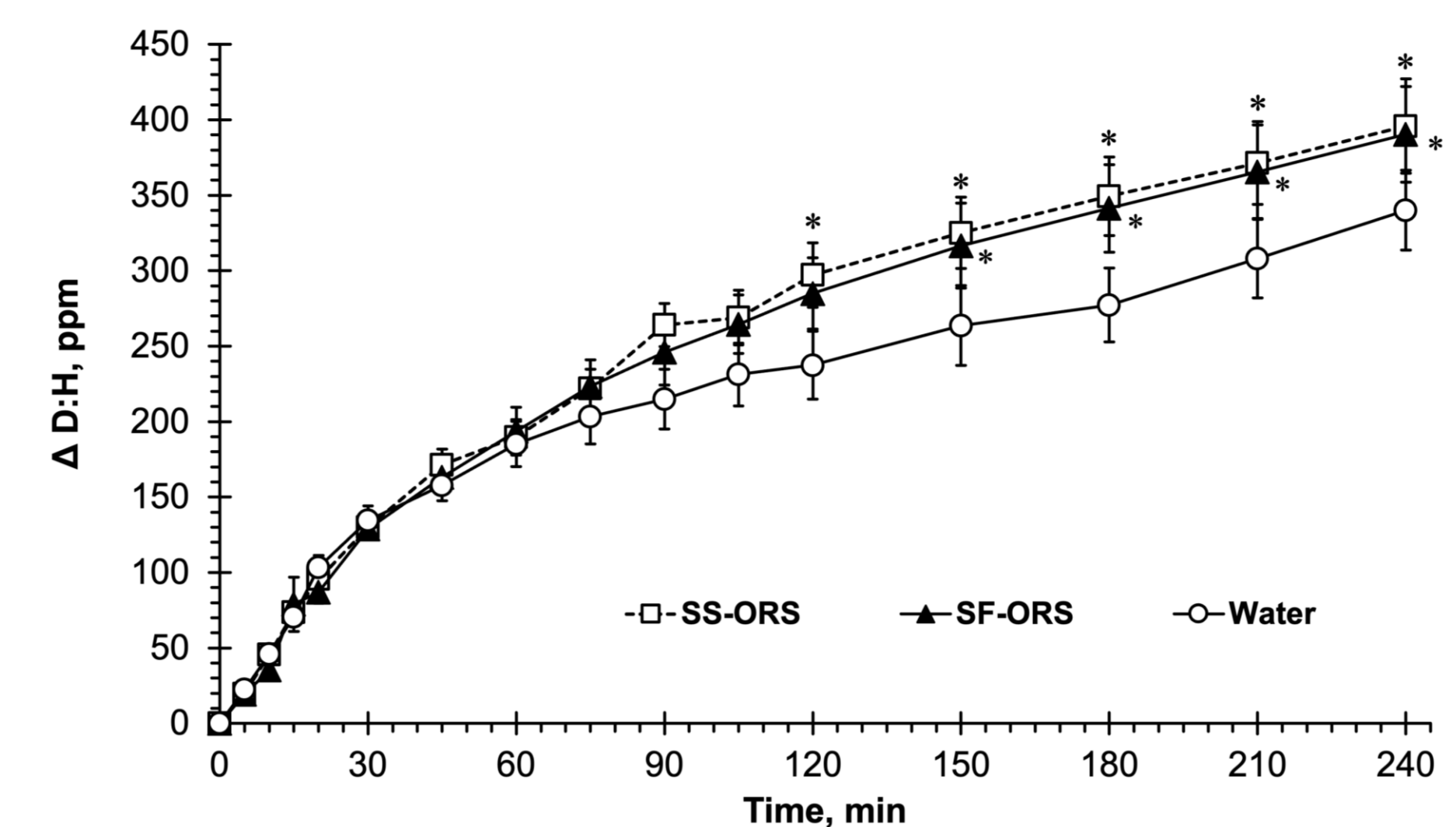
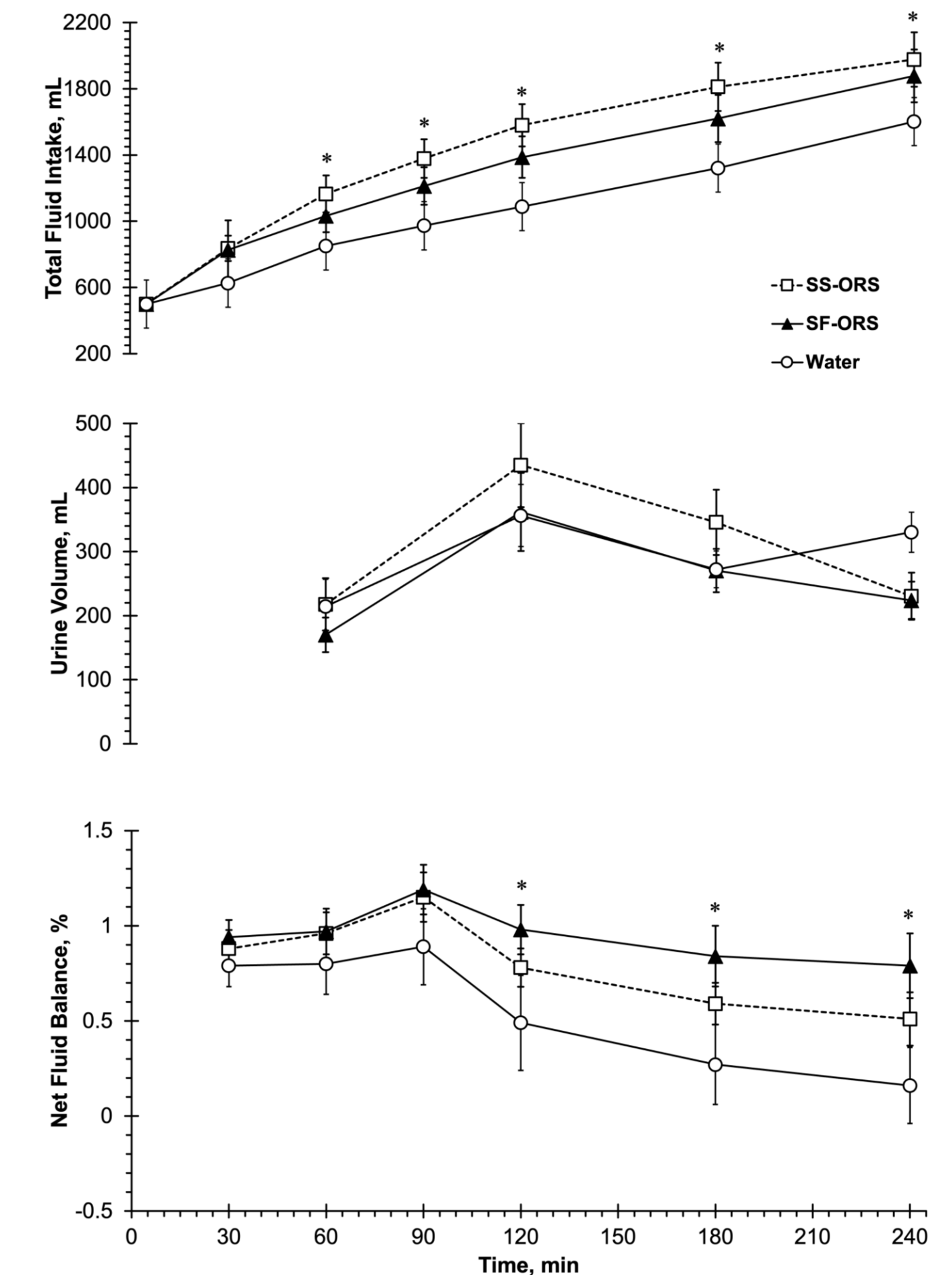
* SF-ORS vs Water
§ SS-ORS vs SF-ORS

Rapid Rehydration with Allulose & Amino Acid-based Sugar-free Beverage



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This study was funded by Unilever



* SF-ORS vs Water
§ SS-ORS vs SF-ORS

CONCLUSION

The allulose- and amino acid-based ORS enhanced fluid absorption and net fluid balance compared to plain water during post-exercise rehydration.