

Effects of High Intensity Inspiratory Muscle Training on Aerobic Capacity and Maximal Inspiratory Pressure in Healthy Adults

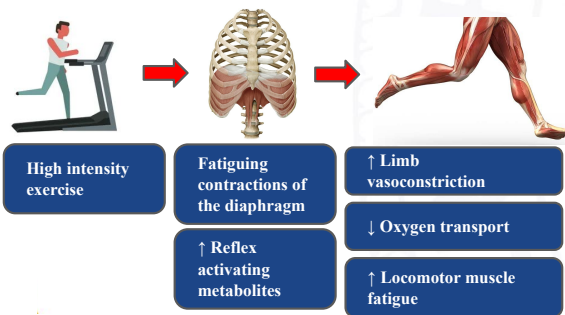
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Introduction

- Diaphragmatic fatigue during maximal exercise causes decreased blood flow to exercising limbs.¹
- Inspiratory muscle strength training (IMST) may decrease diaphragm fatigue.
- Current studies use 50% of maximal inspiratory pressure (MIP) for IMST, but optimal dosing at higher intensities has not been well explored.^{2,3}

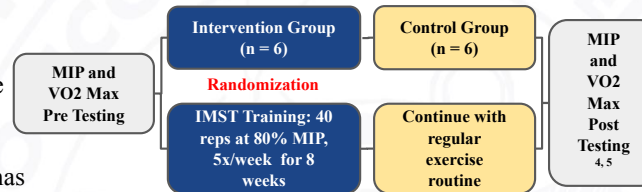


Objective

- Investigate the impact of high intensity IMST on aerobic capacity and maximal inspiratory pressure in healthy adults.

CSP

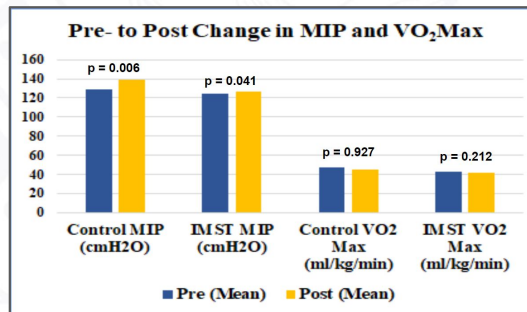
Methods



- This study was IRB approved by the university.
- All participants provided informed consent, and demographic information was collected.

Results

- VO2 max did not change significantly in either intervention group after intervention period (p=0.143).
- Groups demonstrated significant improvement in MIP (p=0.011), but there was no significant difference between groups (p<0.638).



Conclusion

- VO₂ max did not significantly change in the control or intervention groups.
- Post-intervention MIP measurements were significantly improved in both groups, but there was no significant difference between either group.
- High intensity IMST may not improve aerobic capacity in young, healthy adults after an 8-week intervention period.

Clinical Relevance

- Maintaining diaphragmatic strength with IMST may help minimize respiratory fatigue and be useful for healthy adults with injuries limiting their mobility.
- Further research is needed to evaluate optimal IMST intensity for maximal benefit as 80% may be too intense.

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