

International Journal of Research in Exercise Physiology

Original Research Article

Manuscript formatting guidelines for Authors

MANUSCRIPT TITLE

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¹Affiliation Lab/Program/Department, City, State, Country

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Abstract

Introduction: Cardiovascular disease (CVD) is the leading cause of death worldwide, accounting for 17.3 million deaths per annum, a figure that is projected to grow to more than 23.6 million by 2030. It has been estimated that 80% of premature heart disease can be prevented through positive modification of CVD risk factors. It has been demonstrated that systemic thermal therapy by regular administration of heat through a variety of methodologies, such as sauna or taking a warm bath, can induce a number of advantageous responses in terms of cardiovascular health. However, no studies have investigated the effects of exercise training with a sauna suit, a practical and portable alternative to other thermal treatments, on cardiometabolic risk factors. The purpose of this study was to determine the effectiveness of exercise training with a sauna suit at positively modifying cardiometabolic risk factors. **Methods:** Twelve men (mean \pm SD: age, height, weight, percentage body fat, and $VO_2\max = 25.3 \pm 7.3$ yr, 179.6 ± 5.7 cm, 78.6 ± 7.6 kg, 14.6 ± 3.3 %, and 50.4 ± 8.8 mL/kg/min, respectively) completed a 6wk exercise training program (30min sessions performed 5 days/wk at a moderate-intensity of 55-60% heart rate reserve) while wearing a sauna suit. Cardiometabolic risk factors were measured at baseline and post-program. **Results:** After 6wk of exercise training with a sauna suit there were significant ($p < 0.05$) improvements in the following cardiometabolic risk factors: percentage body fat (relative Δ -1.5%), systolic (relative Δ -1.4%) and diastolic (relative Δ -3.1%) blood pressure, triglycerides (relative Δ -15.5%), HDL cholesterol (relative Δ +6.4%), and maximal oxygen uptake (relative Δ +8.5%). **Conclusions:** Findings from the present study support the feasibility of exercise training with a sauna suit to improve cardiovascular health. Indeed, the present study demonstrated that regular moderate-intensity exercise training with a sauna suit elicited improvements in cardiorespiratory fitness and positive modification to several key CVD risk factors.

Key Words: Exercise, Physiology, Metabolism, Cardiovascular,

Key Words: Provide up to 5 additional words that relate to the manuscript. Do not repeat any words found in the title. Suitable examples might be; Lactate, Acidosis, Fatigue, BMI, $VO_2\max$, Endurance, Performance.

If possible, please keep your Abstract and Key Words section at a length that fits on this front page.

INTRODUCTION

This section needs to provide enough data and interpretations from past research to clearly identify the need for doing your study. However, it should not be too long. Focus the content on being able to answer several important questions.

What has been done to date? What is deficient in this knowledge, or in the procedures used? Why is it important to ask and answer your main question?

The last item above should lead into your purpose statement. You could then follow this with some expected hypotheses.

METHODS

Subjects

Experimental design

Procedures

Statistical Analyses

Include all dependent variables measured in the study, state the significance level(s) used, and we recommend commenting on statistical power and how you determined sample size.

RESULTS

Please avoid the presentation of any Results in Methods and Discussion sections. Provide all Tables and Figures after the Reference section. Make sure you refer to all Tables and Figures, and do not duplicate data in both text and Table or Figure presentation.

DISCUSSION

Use sub-headings to give structure to the Discussion.

CONCLUSIONS

Concisely summarize the findings and provide some detail for how your findings contribute to exercise physiology.

ACKNOWLEDGEMENTS

Provide details of any individual(s) or agencies/institutions that you feel need special recognition.

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REFERENCES

Standard Article

1. Blair SN. (2009). Physical inactivity: the biggest public health problem of the 21st century. *Br J Sports Med*, 43, 1-2.
2. Dalleck LC, Astorino TA, Erickson RM, McCarthy CM, Deadell AA, Botten BH. (2012). Suitability of verification testing to confirm attainment of VO₂max in middle-aged and older adults. *Res Sports Med*, 20, 118-128.

Books

1. Pescatello LS. (2014). *ACSM's Guidelines for Exercise Testing and Prescription* (9th ed). Baltimore, MD: Lippincott Williams & Wilkins.

References should be listed in the order of citation. Citations in text should be superscripted numbers with no spaces between text and numbers. For example:

Cardiovascular disease (CVD) is the leading cause of death worldwide, accounting for 17.3 million deaths per annum, a figure that is projected to grow to more than 23.6 million by 2030¹. It has been estimated that 80% of premature heart disease can be prevented through positive modification of CVD risk factors².

Tables

Use the Word table feature and format according to example below.

Table 1. Physical and cardiometabolic characteristics at baseline and 6wk. (Values are mean ± SD).

Characteristic	Baseline	6wk	relative % change
Age (yr)	25.3 ± 7.3	_____	_____
Height (cm)	179.6 ± 5.7	_____	_____
Body weight (kg)	78.6 ± 7.6	78.2 ± 7.0	-0.5%
Waist circumference (cm)	81.4 ± 5.7	80.8 ± 5.6	-0.7%
Body fat (%)	14.6 ± 3.3	13.1 ± 2.9*	-10.3%
Resting HR (b/min)	60.6 ± 9.2	57.4 ± 9.3*	-5.3%
Systolic blood pressure (mmHg)	118.8 ± 3.0	117.1 ± 2.6*	-1.4%
Diastolic blood pressure (mmHg)	79.7 ± 4.8	77.2 ± 5.0*	-3.1%
HDL cholesterol (mg/dL)	54.8 ± 14.3	58.3 ± 11.9*	+6.4%
LDL cholesterol (mg/dL)	96.7 ± 18.0	94.5 ± 16.8	-2.3%
Triglycerides (mg/dL)	106.3 ± 58.1	89.8 ± 52.4*	-15.5%
Blood Glucose (mg/dL)	84.3 ± 6.0	83.0 ± 6.4	-1.5%

* Within-group change is significantly different from baseline, *p* < 0.05.

Use the “±” symbol throughout all tables and text presentation of mean ± SD data.

Use Calibri 11 point font for all table content, including the table header and any footer information. Note that the above table example is just a guide. Format the table best to suit your data and study design.

Figures

Make these clear, with careful use of color. Make sure you label each axis, and provide correct units for all axis labels.

Do not include figure legends in the figure. Provide separate written figure legends in the Word document, as follows:

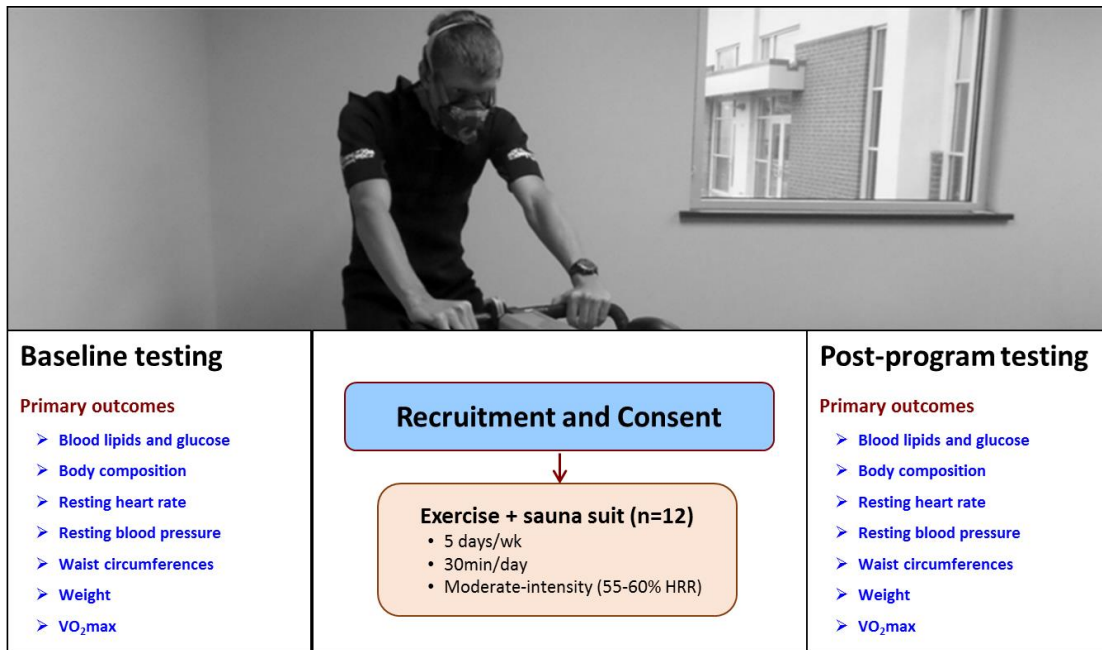


Figure 1. Experimental design for cardiometabolic responses to exercise training with a sauna suit.

Research Manuscript Line spacing and font guidelines

All 1.15 line spacing, 12 font, Calibri (unless specified otherwise)

Title

Capitalized, 18 font, black.

ABSTRACT upper case

Text is 11 font, black.

INTRODUCTION-CONCLUSION sections upper case, bold 12 font.

Text is 12 font, black.