

# Endurance and Performance study of effects of sauna workouts

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An Australian study looked at the effects of sauna after workouts in six male distance runners. These runners completed 3 weeks of post-training sauna bathing and 3 weeks of control training. During the study, the runners sat in a sauna immediately post-exercise for an average of 31 minutes on 12 occasions. A performance test was executed, consisting of a 15 minute treadmill run to exhaustion at the runner's current best speed over 5 km. The test was performed on the 1st and 2nd day following completion of the sauna and control periods, and the times were averaged.

The results, while only in a small very specific group, were very encouraging. Sauna bathing increased run time to exhaustion by 32% which is equivalent to an enhancement of 1.9% in an endurance time trial.

Plasma and red-cell volumes increased by 7.1% after sauna, relative to control with changes in plasma volume and total blood volume being associated with the increase in performance. The authors concluded that 3 weeks of post-exercise sauna bathing produced a worthwhile enhancement of endurance running performance, probably by increasing blood volume. The heat stress of a single session of sauna bathing produces dilution of the blood by increasing the volume of the fluid portion of the blood. Over time this effect decreases.

It is possible that the dilution of the blood as well as change in blood flow to the kidney can cause the body to produce more red cells via release of erythropoietin. The resulting increase in total blood volume could enhance high-intensity endurance performance by delivering more oxygen to muscles.

## In Summary

- Sauna bathing that can be tolerated for half an hour immediately after a training run provides an additional training benefit.
- After 12 bathing sessions spread over 3 weeks, endurance performance of sub-elite runners is enhanced by a useful 2%, probably via an increase in blood volume.
- Elite endurance athletes may experience smaller gains from such sauna bat

<http://completebalancehealth.com/index.php?page=endurance-and-performance-study-of-effects-of-sauna-workouts>