Les Mills Lab: Hormonal responses to BODYPUMP study

Introduction

There are a raft of positive processes taking place in our bodies when we work out but most of the time people just focus on calorie counting. This study delved into how people's physiological and hormonal responses to two different kinds of workouts compared, even when the calories burned were exactly the same.

Question

If you burn 300 calories doing cardiovascular exercise steadily pedalling on a bike, is that the same as burning 300 calories doing resistance training?

Method

Thirteen healthy, recreationally-active females with prior experience in Les Mills' BODYPUMP™ classes participated in this study. A test was set up to compare BODYPUMP, a resistance training workout, to a steady-state cardio session on a bike. The calories burnt during the BODYPUMP class were measured and that data was used to set the intensity levels for the cycling session to ensure the caloric expenditure was exactly the same between both workouts.

Blood was taken from the participants before and after BODYPUMP, and before and after the cycling session, to measure their hormonal profiles.

Results

Both workouts boosted levels of Human Growth Hormone (HGH) which oxidises fat and builds lean muscle tissue but HGH was 69% greater after BODYPUMP compared to steady-state cycling.

Interleukin 6 – a chemical released by muscles when you exercise – was a statistically significant 3% greater after BODYPUMP. Interleukin 6 plays an important role in the body's inflammatory response to exercise and is known to induce fat oxidation.

Lastly, blood lactate was also measured. Importantly, the accumulation of lactate from exercise sparks the hormone growth response described above. Research suggests that exercising at an intensity above the lactate threshold, and for a minimum of ten minutes, is the greatest stimulus there is to the secretion of HGH. Lactate was a staggering 84% greater after BODYPUMP compared to the cycling workout.

Conclusion

It can be concluded that on all counts, the body has a far greater long-term response to BODYPUMP than it does to a calorie-matched cardio class. BODYPUMP can therefore be described as a more potent exercise stimulus than a steady-state cardio session, providing long-term changes to your body that are, after all, what makes all the effort of exercise so worthwhile.

When it comes to deciding which exercise to do, we can also conclude that it is not just about what calories you burn, but about whether the workout that provides numerous, long-term physiological benefits. BODYPUMP's impact on physiology and body composition is both significant and ongoing.

A link to the published paper in the Journal of Science and Medicine in Sport is available here.

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