

## Have you ever wondered why your evening workouts seem easier than morning workouts?

It has been claimed by athletes for many years that training late in the day seemed easier than an early training session.

Many athletes will have noticed or recorded that their heart rate seemed higher at night and lower in the morning even with an identical workout.

While a physiologic explanation has not been forthcoming the Research Institute for Sport and Exercise Sciences at Liverpool John Moores University has established that maximum 'heart rates and sub-maximal heart rates were lower in the morning'. From this the suggestion is that while it could seem that with morning heart rates lower then people will be more efficient and thus exercise easier- this is not the case.

A review published this year showed what an examination of athletic world records and best performances show that these have happened in late or early evening.

A visiting professor at the University of Texas Health Sciences Centre in Houston, Dr M Smolensky who is an expert in chronobiology – the study of the body clock; considers that in 'terms of athletic performance, strength, power and speed are at their lowest point in the early hours of the morning'. Exercise taken later in the day see stronger and more flexible muscles and the cardio-vascular system more efficient. The body seems to be designed to generate and tolerate a higher heart rate later in the day.

All this seems to add up to planning workouts for late afternoon or early evening. Dr Smolensky argues that this is especially relevant for athletes who are working out three, four or more times a week. Also, that you are better off having a heart attack later in the day!.

So, if you have ever wondered why morning runs seem harder than evening runs there does seem to be a physiological explanation. This may seem to run counter to the obvious, which is, that the body should be fresher and less tired in the morning. Also, a further question arises that if it is harder to train in the morning should not the training benefit be greater?

What the research suggests is that the same benefit is obtained with less effort if training takes place later in the day.

Perhaps in evolutionary terms our forebears lazed around or slept late in the morning and did all the hunting and gathering in the late part of the day and the biological clock adjusted accordingly. It may also be that the body takes time to recover from sleep or that somehow

energy systems developed to overcome natural tiredness that could occur during the course of an active day. Or maybe it just had something to do with daylight or no breakfast.

Anyway, what may well be relevant for athletes training twice a day is that early day workouts should be formulated to take the findings into account. High VO2 max and gym work may well be best taken later in the day with aerobic work in late morning. This is somewhat akin to undertaking technique work always with the wind behind you when you need to concentrate on technical skills and drills. The reason being obvious but often either ignored or not known by coaches.

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