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## **Renin angiotensin system: Novel perspectives to physical trainers**

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Date show an important interaction between the rennin angiotensin system and physical exercise in different tissues, this association is present in health or disease. The Angiotensin-(1-7) and physical exercise has been shown important dealings to ameliorate diseases like hypertension, in different models: Two-kidney one-clip hypertensive rats, spontaneously hypertensive rats, in chronic failure, preeclampsia model or in diabetes. This interaction has been evidenced through an increase in ACE2/Ang(1-7)/Mas axes activity. Date with knockout animals or using antagonist, show that Mas receptor is crucial to exercise effects, in addition ACE2 activity is normalize through physical exercise. Date from our laboratory show that the oral formulation of Ang-(1-7) can protect against muscle damage induced by physical exercise in rats and in mice Knockout to Ang-(1-7) receptor, in addition, in humans the oral formulation of Ang-(1-7) induced lower levels of muscle damage marker and reduce a subjective pain scale after strength exercise.

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## **The effects of night sleep following mental imagery on a goal-based task learning**

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Motor skill learning involves both practice and implicit, sleep-dependent process of consolidation that develops after training ("off-line" learning). An extensive range of experimental studies has provided proof that a night of sleep may improve motor performance following physical practice, but little is known about its effect after motor imagery (MI). Thirty six subjects were assigned to one of three groups that differed in the training method (Consolidated MI, Preparatory MI and Physical practice groups). The physical performance was measured before training (pre-test) and after a night of sleep (post-test). As expected, all groups improved their performance during the post-test. The Consolidated MI group was further found to improve motor performance after sleep, so suggesting that sleep-related effects are effective following mental imagery. Such findings highlight the reliability of MI in learning process, which is thought to consolidate when associated with sleep.

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