

Placebo boosts endurance running performance

December 1 2014, by Stuart Forsyth

Performance-enhancing drugs can improve a runner's best time – even when they haven't taken them.

A study examining the [placebo effect](#) found that endurance runners who thought they were injecting a fictional [performance](#)-boosting drug called OxyRBX improved their race time even though they had taken only saline.

Investigators from the University of Glasgow told 15 endurance-trained club-level runners that they were being given a new performance enhancing drug called OxyRBX which was said to improve [oxygen delivery](#) to the muscles in a similar way to a hormone called recombinant human erythropoietin (r-HuEPO).

The runners, who all had personal best times over 10km of 39.3 minutes on average, self-injected the saline placebo, thinking it to be OxyRBX, over seven days and 3km running performances in head-to-head competitions were assessed.

The [runners](#) improved their race time by an average of 1.2% – a small but significant margin after taking the placebo.

Participants reported reductions in physical effort, increased potential motivation and improved recovery after running following the saline injections.

Dr Jason Gill of the Institute of Cardiovascular & Medical Sciences, said: "The change in performance was of clear sporting relevance, albeit smaller than the improvement that would be produced by r-HuEPO.

"The [placebo](#) may work by reducing perception of effort and increasing potential motivation in line with a psychological expectation of performance."

The study, which also involved Dr Ramzy Ross and Dr Cindy Gray, is published online by the journal *Medicine and Science in Sports and Exercise*.

Provided by University of Glasgow

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