Study busts sports-drink myths

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Peter Gill, a Rhodes Scholar from the U of A's Faculty of Medicine & Dentistry, was part of an Oxford University study that showed little evidence to back up advertising claims for sports products.

(Medical Xpress) -- With the Olympics starting July 27, reaching the top of the podium is on the minds of thousands of athletes worldwide. But a new study published in the *British Medical Journal* shows that those amateur athletes can't count on sports drinks or special shoes to help them achieve their goal of competing for gold at the Games.

Peter Gill, a Rhodes Scholar from the University of Alberta's Faculty of Medicine & Dentistry, was a part of the study out of the University of Oxford, where he is completing his PhD. The research involved looking at claims by sports-drink and sportswear companies that their products help to improve performance and prevent injury.

"The major results that we found in the research were that there was little sound evidence to support claims made by some of sport's biggest

brands," said Gill. "It is 'virtually impossible for the public to make informed choices about the benefits and harms of advertised sports products.'"

The Oxford researchers searched advertisements in general magazines, as well as sport and fitness magazines in the United Kingdom and the United States with claims related to sports performance or enhanced recovery. The researchers then went on to look at the evidence behind performance-enhancing claims, which included obtaining full-text copies of all cited references, appraising the methods used in the research and determining the risk of bias.

"More than half of the websites that made performance claims did not provide any references," said Gill. "We were only able to critically appraise approximately half of the articles, and of these 74 articles, 84 per cent were judged to be at high risk of bias. Only three of the 74 studies were judged to be of high quality and at a low risk of bias."

The researchers looked at six common myths in sport:

• The colour of urine accurately reflects hydration.
• You should drink before you feel thirsty.
• Energy drinks with caffeine or other compounds improve sports performance.
• Carbohydrate and protein combinations improve post-workout performance and recovery.
• Branched amino acids improve performance or recovery after exercise.
• Compression garments improve performance or enhance recovery.

Results from the study debunked several of these claims. The color of urine—something athletes are told to keep an eye on—depends on many factors, not just hydration. Drinking before you feel thirsty may worsen performance. Energy drinks with caffeine and other compounds have no

benefit above and beyond the boost from caffeine. And carbohydrate and protein combinations post-workout don't improve performance and recovery.

"The results are very surprising as they question many of the claims made by advertisements for sports products," said Gill. "The current evidence is not sufficient to inform the public about the benefits and the harms of these products.

"The marketing of sports products has become a multibillion-dollar industry and the consumption of so-called energy drinks is increasing year on year, but research in this area has previously been labelled as methodologically poor. Many of the sports drinks contain high levels of sugar and there is concern their consumption may contribute to the increasing levels of obesity in children."

More information: www.bmj.com/about-bmj/article- … -about-sports-drinks

Provided by University of Alberta