

For immediate release

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DEHYDRATION HINDERS BASKETBALL PERFORMANCE

Players need proper fluid replacement for shot accuracy, speed

INDIANAPOLIS – Dehydration is directly linked to a decline in performance on the basketball court, according to a study published today in *Medicine & Science in Sports & Exercise*®, the official journal of the [American College of Sports Medicine](#) (ACSM).

The study examined 17 males aged 17–28, and tested performance during basketball drills at various levels of dehydration (up to 4 percent). As dehydration increased, skill performance decreased, indicating that proper hydration is necessary for peak performance on the court.

“The study supports the notion that players should be given adequate opportunities to hydrate themselves during play and practice,” said Lindsay B. Baker, Ph.D. candidate, Pennsylvania State University, and lead author of the study.

Study participants completed three hours of interval treadmill walking, either with or without hydration. After a 70-minute rest period, subjects then performed a series of continuous basketball drills designed to simulate a fast-paced game. These included basketball-specific movement exercises (e.g., sprinting, defensive slides, and jumping) and shooting drills from various spots on the court (e.g., the free throw and three-point lines). Hydrated test subjects were given either flavored water or a carbohydrate-electrolyte sports drink.

The test results showed that:

- Subjects who were dehydrated by at least two percent consistently performed basketball movement exercises at slower rates.
- Dehydrated subjects failed to make as many shots as hydrated players.
- There was no difference in performance between hydrated subjects given flavored water or a carbohydrate-electrolyte drink.

Previous studies on NBA basketball players have shown significant lack of hydration, with an average of only about 40 percent of fluid losses from sweat replaced during practices or games.

“Many times the outcome of a basketball game is decided in the final minutes, when players tend to be the most dehydrated,” Baker said. “It’s crucial for basketball coaches at any level to be sure that their players are drinking adequate fluids during games and workouts to help prevent dehydration and attain peak performance.”

In February 2007, ACSM issued the Position Stand “Exercise and Fluid Replacement,” which provides insight on how to properly hydrate before, during, and after exercise. View the position stand [here](#).

The American College of Sports Medicine is the largest sports medicine and exercise science organization in the world. More than 20,000 international, national, and regional members are dedicated to advancing and integrating scientific research to provide educational and practical applications of exercise science and sports medicine.

copy of the research paper (Vol. 39, No. 7, pages 1114–1123) or to speak with a leading sports medicine expert on the topic, contact the Department of Communications and Public Information at 317-637-9200 ext. 127 or 133. Visit ACSM online at www.acsm.org.

The conclusions outlined in this news release are those of the researchers only, and should not be construed as an official statement of the American College of Sports Medicine.