

J14 Runner Science

April 2009

Intro: Running a marathon can be a grueling effort, even for well-trained athletes. Runners can suffer electrolyte imbalances and even kidney problems. An important factor in all this is hydration. But how much and what should runners drink? Those are questions doctors at Mayo Clinic want to answer. They're studying the effects running has on the human body in hopes of being able to tell runners and other endurance athletes how best to prepare for an event.

Video

Audio

Total running time 1:36

RON PORTER IS ABOUT TO RUN HIS 10TH MARATHON.

CG :03 to :11

**Ron Porter
Marathon runner**

"IT'S REALLY ABOUT THE CHALLENGE. TO GO OUT AND IMPROVE MYSELF AND IMPROVE MY TIMES."

BUT BEFORE THIS 26.2, HE AND HUNDREDS OF OTHER RUNNERS ARE GIVING THEIR VITAL SIGNS AND A FEW DROPS OF BLOOD TO RESEARCHERS AT MAYO CLINIC.

CG :19 to :22

**Michael Mohseni, M.D.
Mayo Clinic**

"WE WANT TO SEE WHAT KIND OF HYDRATION STRATEGY THEY'RE USING...."

[NATS OF STARTING GUN: **BOOM!**]
AND THEN LOOKING AT WHAT
ADVERSE OUTCOMES THEY MIGHT
ENCOUNTER AFTER RUNNING THE
RACE.”

DR. MICHAEL MOHSENI AND HIS
TEAM ARE ANALYZING RUNNERS’
BLOOD SAMPLES TO FIND OUT
HOW HYDRATION,

[NATS: “WATER”]

WHAT AND HOW MUCH RUNNERS
DRINK, AFFECTS SODIUM LEVELS
AND KIDNEY FUNCTION. YOU SEE,
SODIUM IS AN ELECTROLYTE. IT
WORKS WITH OTHER SUBSTANCES
TO STABILIZE CELL MEMBRANES
AND KEEP YOUR MUSCLES
FUNCTIONING PROPERLY. IF YOUR
SODIUM LEVEL DROPS TOO LOW
FROM TOO MUCH WATER OR
EXCESSIVE SWEATING, YOU CAN
DEVELOP WHAT’S CALLED
HYPONATREMIA. SYMPTOMS

GPX:

Hyponatremia

- **Nausea**
- **Vomiting**
- **Seizures**
- **Death**

INCLUDE NAUSEA, VOMITING, SEIZURES AND IN SEVERE CASES, DEATH. RUNNERS MAY ALSO DEVELOP A DECREASE IN KIDNEY FUNCTION FROM DEHYDRATION. MOHSENI'S RESEARCH WILL REVEAL WHICH RUNNERS MAY BE MORE PRONE TO DEVELOPING THESE PROBLEMS. AND WITH THIS INFORMATION HE HOPES TO MAKE RECOMMENDATIONS AS TO HOW RUNNERS SHOULD PREPARE FOR A RACE IN TERMS OF WHAT AND HOW MUCH THEY DRINK..

Standup

CG 1:21 to 1:30

Vivien Williams

Reporting

“IT'S SIMILAR TO RESEARCH DONE ON SPORTS DRINKS THAT SHOWED RUNNERS WHO DRINK LIQUID FORTIFIED WITH ELECTROLYTES AND ENERGY DO BETTER THAN RUNNERS WHO DRINK WATER ALONE.” RESEARCH THAT WILL HOPEFULLY HELP RUNNERS STAY HEALTHY

AND IMPROVE THEIR
PERFORMANCE. FOR MEDICAL
EDGE, I'M VIVIEN WILLIAMS.

Anchor tag:

Dr. Mohnseni says preliminarily his data shows that about 8-percent of marathon runners experience issues with hyponatremia and up to 19-percent have decreased kidney function. The good news here is that most runners recover on their own quickly after a race. But he hopes his research will show how hydration can prevent these issues.

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