## PHYS 2 ORG

## Coin tosses can be easily rigged: study

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The ubiquitous coin toss is not so random after all, and can easily be manipulated to turn up heads, or tails, a Canadian study has found.

Used for centuries to settle feuds, start sporting matches, decide an uncertain course of action, and even as a randomization tool in some research studies, coin tosses were thought to be impartial arbiters.

Not so, say researchers at the University of British Columbia in westernmost Canada who found that the outcome of a coin toss can actually be influenced with minimal training.

They asked 13 ear, throat and mouth (otolaryngology) residents in Vancouver to each flip a coin 300 times to see if they could bring up heads.

All of the participants achieved more heads than tails, with 7 of the 13 coming up with "significantly more heads" than tails, said the study published in the current December 7 issue of the Canadian Medical Association Journal (CMAJ).

One of the participants was able to achieve heads 68 percent of the time.
Success depended on how high a coin was tossed, how quickly it was tossed it, how many times it was spun and how it was caught.
"This study shows that when participants are given simple instructions about how to manipulate the toss of a coin and only a few minutes to
practice this technique, more than half can significantly manipulate the outcome," the researchers wrote.

The study was included in the CMAJ's annual Christmas holiday review of offbeat research.

## Other CMAJ highlighted studies found:

-- a link between rain and medical school admissions. Students interviewed on rainy days received a one-percent lower score on admissions tests than those on sunny days, suggesting mood plays a part in selection;
-- quarantine and cure would only delay the inevitable spread of a zombie outbreak. A mathematical model was created for just such an unlikely occurrence;
-- and public health officials must come up with scarier names for viruses in order to frighten people into taking preventive health measures to curb epidemics.
"H1N1 sounds like the name of an income tax form or a robot that might hang out with R2D2 in Star Wars," said researchers. "Compare this to the Black Death.
"If public health physicians want people to live, they must learn how to scare them to death."
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