

Accepted Manuscript

Title: Breath Alcohol Elimination Rate as a function of Age, Gender, and Drinking Practice

Authors: Dary D. Fiorentino Herbert Moskowitz



PII: S0379-0738(13)00435-0
DOI: <http://dx.doi.org/doi:10.1016/j.forsciint.2013.09.017>
Reference: FSI 7359

To appear in: *FSI*

Received date: 30-4-2013
Revised date: 31-8-2013
Accepted date: 18-9-2013

Please cite this article as: D.D. Fiorentino, H. Moskowitz, Breath Alcohol Elimination Rate as a function of Age, Gender, and Drinking Practice, *Forensic Science International* (2013), <http://dx.doi.org/10.1016/j.forsciint.2013.09.017>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ABSTRACT

The objective of this study was to determine whether breath alcohol elimination rate varies as a function of age, gender, and drinking practice, factorially combined. Eighty-four men and 84 women drank enough alcohol to produce peak BrACs of .110 g/210L for heavy and moderate drinkers and BrACs of .090 g/210L for light drinkers. An Intoxilyzer 5000 was used to generate the concentration-time profiles. Mean (*M*) elimination rates (g/210L/h) were found to be higher for women ($N = 84$, $M = .0182$, $SD = .0033$) than for men ($N = 84$, $M = .0149$, $SD = .0029$), $F(1, 144) = 57.292$, $p < .001$; higher for heavy drinkers ($N = 56$, $M = .0176$, $SD = .0038$) than for light and moderate drinkers combined ($N = 112$, $M = .0160$, $SD = .0032$), $F(1, 144) = 12.434$, $p < .01$; and higher for older subjects (51-69 years, $N = 42$, $M = .0180$, $SD = .0038$) than younger subjects (19-50 years, $N = 126$, $M = .0161$, $SD = .0033$), $F(1, 144) = 14.324$, $p < .001$. None of the two-way interactions (age x gender, age x drinking practice, gender x drinking practice) or the three-way interaction (age x gender x drinking practice) was statistically significant. Limitations of the current study and suggestions for further research are discussed.

Keywords:

Alcohol

Elimination rate

Drunk driving

Forensic science

Pharmacokinetics

Retrograde extrapolation

Download English Version:

<https://daneshyari.com/en/article/6552770>

Download Persian Version:

<https://daneshyari.com/article/6552770>

[Daneshyari.com](https://daneshyari.com)