



Alabama Physician Health Program

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the Alabama State Board of Medical Examiners

Date: August 15, 2005

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Memo

To: Regulatory Board Staff or Members

From: Gregory E. Skipper, MD, Fellow, American Society of Addiction Medicine, and Consultant to the Alabama Board of Medical Examiners

Re: **Ethylglucuronide Test Advisory**

Ethylglucuronide, EtG, testing is being increasingly utilized along with standard urine drug testing to detect alcohol use in licensees who have signed abstinence agreements. My associates in Europe and I have been involved in recognizing the potential of EtG testing, bringing the test to the USA, studying the efficacy of the test, and publishing our findings regarding EtG testing.¹

The following updated advisory has been developed in response to questions from monitoring programs and regulatory boards regarding EtG testing:

- No laboratory test is 100% accurate. Clinical correlation is always important.
- Some people produce more EtG for a given dose of ethanol than others associated with a known genetic polymorphism in the human UDP-glucuronyl transferase enzyme system. The exact limits of this variation are not known.
- A positive EtG is not proof of intentional alcoholic beverage consumption. Low level positive tests are known to occur due to incidental exposure. The cutoff for possible incidental exposure vs. intentional use has not been accurately established, due to many factors including; amount of "incidental" exposure, individual metabolism, hydration, kidney function, etc..

For the above reasons it is inadvisable whenever possible to refrain from taking action against an employee or licensee based on urine EtG testing alone. In the presence of a positive EtG test, if alcohol use is denied, we encourage the use of clinical evaluation by an addiction medicine specialist to more fully assess the meaning of a positive test. We encourage Boards, Courts, and/or Employers to rely on Addiction Medicine assessments to help interpret positive test results.

Despite the above limitation many monitoring programs have found EtG testing to be useful for early detection of alcohol use. EtG is a far superior marker for recent alcohol use than previous tests. More investigation is currently underway.

Questions and Answers:

Q: Have you heard credible reports from around the country that have caused you to question the 100% reliability of the test?

A: We have never presumed or meant to suggest that EtG testing is 100% reliable. We feel very confident that the only reason for EtG in urine is to have had ethanol in the body, however, the extent and effect of incidental exposure in all subjects has not been fully explored or defined.

Q: Is it your recommendation that EtG testing results not be relied upon carte blanche at this point.

A: Yes.

Q: Do you believe that until further study can be done, any score under 1000 could be questioned legitimately, perhaps even up to 1500.

A: These are rough guidelines. I would encourage clinical correlation, especially when the level is below 1500, the patient denies drinking, and there is no other evidence of problems. I would not advise taking action against a licensee if the only evidence of a problem is a low positive EtG test.

Q: Will EtG testing results stand up in court.

A: There are already cases where it has "stood up" in court. In every case that I know about where it has been upheld as meaningful in court or administrative hearings there has also been other information along with EtG testing to compel a decision. I would be hesitant to rely on a low level EtG test by itself.

I hope this information is helpful. If you have other questions I'd be happy to discuss this with you.

Sincerely,

Gregory E. Skipper, MD
Fellow, American Society of Addiction Medicine
Medical Director

¹ Publications re: EtG

Skipper GE, Weinmann W, Wurst FM. Ethylglucuronide (EtG): A New Marker to Detect Alcohol Use in Recovering Physicians. Journal of Medical Licensure and Discipline, 2004,90(2), 14-17

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Skipper GE, Schaefer P, Thierauf A, Weinmann W, Allen JP, Miller M, Wiesbeck GA, Wurst F M (2004) Detection of Surreptitious Alcohol Use Among Health Professionals Recovering from Substance-Related Disorders Using a New Marker, Ethyl Glucuronide. Addiction (submitted 12/03; #03/427)

Wurst F M, **Skipper GE, Weinmann W (2003) Ethyl glucuronide – the direct ethanol metabolite on the threshold from science to routine use.** Addiction 98 (Suppl 2) 51-61

Wurst F M., Vogel R., Jachau K., Varga A., Alling C., **Skipper G.E.,** Alt A. (2003) **Ethyl glucuronide** detects recent alcohol use in forensic psychiatric inpatients. Alcohol Clin Exp Res 27: 471-476
Journal highlight ACER 03/2003 Feature story: www.eurekalert.com. (American Association for the Advancement of Science) The alchemist: www.chemweb.com Frankfurter Allgemeine Zeitung 02.04.2003

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Wurst FM, Wiesbeck G, Forster S, Bechtel G, Wolfersdorf M, Huber P, Alexson S, Gilg, T, Jachau K, Varga A, Alling C, **Skipper G,** Pragst F, Auwärter A, Weinmann W (2003) **Further significance for the diagnostic and therapeutic usefulness of the non oxidative direct ethanol metabolites ethyl glucuronide (EtG), fatty acid ethyl esters (FAEE) and phosphatidyl ethanol (PEth) in comparison to traditional markers.** Pharmacopsychiatry 36: 275

Wurst F M , Wiesbeck GA, Forster S, Bechtel G, Wolfersdorf M Huber P, Alexson S, Gilg T, Ladewig D, Jachau K, Varga A, Alling C, **Skipper G,** Pragst F, Auwärter A, Weinmann W (2003) **Non oxidative direct ethanol metabolites in comparison to traditional markers: Further significance for the clinical usefulness of ethyl glucuronide (EtG), fatty acid ethyl esters (FAEEs) and phosphatidyl ethanol (PEth).** The College on Problems of Drug Dependence (CPDD), 65th Annual scientific meeting, June 14-19, 2003, Bal Harbour, Florida

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Wurst FM, **Skipper GE, Weinmann W, Ethyl Glucuronide – the direct ethanol metabolite on the**

threshold from science to routine use, 2003 Society for the Study of Addiction to Alcohol and Other Drugs, pg 1-11, Oct 2003

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Wurst F. M. on behalf of the WHO/ISBRA ***Study on State and Trait Markers of Alcohol Use and Dependence*** Investigators, J. Metzger D. Ladewig, F.Müller-Spahn, K. Jachau , A. Varga, C. Alling, **G. E. Skipper**, A. Alt, L. Pridzun, T. Gilg, S. Alexson, J. Dierkes, G. Bechtel, S. Forster , M. Wolfersdorf Ethyl glucuronide: The promising marker of recent alcohol consumption on the step from science to routine use. Invited lecture, 18th International Congress of Clinical Chemistry and Laboratory Medicine (chair: Per Simonsson, Schweden), Kyoto, October 2002

Schaefer P., Thierauf A., Mueller C. A., Vogt S., Weinmann W., **Skipper G.E.**, Miller M., Wurst F.M. (2002) ***The sensitive Determination of Ethylglucuronide as a Marker for Alcohol Consumption by LC/Negative Ion-spray-MS/MS***, Congress of the American Society for Mass Spectrometry (ASMS)

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