

Between the Lines - Volume 2, Number 1, 1994

National Traffic Law Center - Resource Clearinghouse

The National Traffic Law Center (NTLC) is expanding its clearinghouse of resources to assist prosecutors, judges, and others in the justice system. NTLC is contacting organizations, government agencies and private institutions identified as having resources addressing traffic safety and particularly impaired driving issues. Expert witnesses, research studies, model legislation and speakers are among the various resources that NTLC will continue to locate for inclusion in the clearinghouse. NTLC is compiling a "brief bank" of legal memoranda, appellate briefs and transcripts in reference to new and original legal challenges.

NTLC will become an even better resource for prosecutors and judges by having the ability to access information or to refer professionals to the appropriate organization. If you would like to list your organization, recommend speakers and trainers, contribute briefs and memoranda or list yourself as an expert in a particular area, please contact the NTLC.

Diabetes as a Defense

The diabetic defense is neither new nor novel, but often can catch a prosecutor by surprise. The defense consists of the defendant claiming he was not drunk but suffering from a diabetic reaction. There are a number of issues that a prosecutor should be aware of when attempting to rebut the diabetes defense. Initially, it is important to recognize that there are two types on diabetes: Type I (insulin dependent) and Type II (non-insulin dependent). Insulin dependent diabetics take insulin injections to lower their blood sugar because their pancreas is generating little or no insulin. Type II diabetes develops when the pancreas is producing a small amount of insulin but not enough to maintain blood sugar at normal levels. When a diabetic does not eat enough or drinks alcohol he may suffer from low blood sugar or hypoglycemia/insulin reaction. The symptoms of an insulin reaction are similar in many instances to the behavior of a person under the influence of alcohol: slurred speech, uncoordinated movements, confusion, and an alcohol-like odor on the breath.

The diabetic defense includes a ready-made explanation for breathalyzer readings. One element on the diabetic defense is that acetone emitted by a diabetic while having an insulin reaction interferes with a breathalyzer sample. The National Highway Traffic Safety Administration (NHTSA) issued a report in September 1985 regarding acetone interference in breath alcohol measurement. This report concluded that diabetics with higher than normal acetone levels usually suffer from "uncontrolled" diabetes (i.e. not maintaining blood sugar at normal or non-diabetic levels) which would render the true

diabetic to be too sick to drive and require hospitalization. Those diabetics who have their condition under control would not generate significant enough amounts of acetone on their breath to interfere with a breath alcohol measurement.

To determine if the defendant may have a valid diabetes defense, a prosecutor should ask the following questions:

- Do the defendant's medical records indicate that he/she is a diabetic?
- Was the defendant diagnosed with diabetes prior to or subsequent to his arrest?
- Does the defense plan to call an expert witness to testify that the defendant was suffering from low blood sugar at the time of the arrest?
- Is the expert witness the treating physician? Did he/she examine the defendant on the date of the arrest? Did the expert ever examine the defendant?
- Is the defendant an insulin dependent or non-insulin dependent diabetic? Non-insulin dependent diabetics are unlikely to even emit acetone from their breath.

For additional information on diabetes as a defense, as well as a copy of the NHTSA report on acetone interference with breath measurement, contact NTLC.

Serum v. Whole Blood

Have you ever tried cases where defense counsel challenged a hospital blood test, claiming a valid correlation cannot be made between serum and whole blood test results? Usually, these challenges are made in the most egregious cases involving car crashes and personal injuries. Recent court decisions in various jurisdictions have held that serum tests converted to whole blood test results are admissible in evidence.

Serum is part of whole blood. When whole blood is spun in a centrifuge, the heavier blood cells go to the bottom and the lighter serum remains on top. Lab technicians, toxicologists and other hospital personnel use this top layer of serum to determine a blood alcohol reading. Serum samples produce higher alcohol content values than whole blood samples because serum contains more water than whole blood. Alcohol has an affinity for water, thus a blood test performed on serum will result in a higher blood alcohol reading than a test performed on whole blood.

Although serum tests result in higher BAC readings than do tests on whole blood, courts have recognized a correlation between serum and whole blood. In fact, differences in the readings can readily be rectified by converting serum alcohol readings into whole blood

alcohol readings. Conversion is necessary in most states and is often highly relevant to the outcome of a case. Specifically, a state's failure to produce conversion evidence has resulted in reversal of a defendant's driving under the influence conviction.

The defendant may challenge conversion of serum to whole blood claiming every individual has a different conversion ratio or that the defendant was on medication or dehydrated. While individual ratios may vary, experts generally agree that there is a known range within which a person's conversion ratio will fall.

Prosecutors should be armed with a thorough knowledge of the distinctions between serum and whole blood readings and consult with their toxicologist to discuss the conversion ratio used. The process of converting a serum reading to a whole blood reading does not involve complex equations. Defense counsel's attempts to make the basic conversion ratio much more complicated than it is can be easily defeated by preparing yourself and your witness in advance.

NTLC has recent case law and research articles on the issue of converting serum test results to whole blood.

Winning With Technology: NDAA Summer Conference Theme

The National District Attorneys Association (NDAA) is looking to the future of prosecution. This year's NDAA summer conference theme is "Winning with Technology." The goal of the conference is to assist prosecutors use of the latest technology to manage their offices, as well as effectively present their case in court. Topics will range from basic introductory material to sophisticated technology. Utilizing trial technology such as video tape, aerial photographs and topographical maps provide a jury with a clearer vision and may be more effective than the spoken word.

Vendors are expected to exhibit many products and provide the opportunity for hands-on demonstrations. Presentations are tentatively scheduled for impaired driving technology such as ignition interlock devices, passive alcohol sensors and driver license bar coding systems.

In addition, NDAA's new electronic bulletin board service will be demonstrated. The NDAA bulletin board will provide subscribers with access to NTLC resources such as expert witness lists and legislative resource books.

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