Alcohol Education 101

Dr Brader Adaleine Brathwaite
Faculty of Medical Sciences, UWI

Firstly, let the designated "Trickidadian" who plans to suck mints in order to foil the breathalyser test know that the Police "Occifer" will not be outwitted! The breathalyser does not work on scent but on the proportion of alcohol in the breath. Next, many people do not realise that the amount of alcohol in a shot of spirits, a can of beer, or a glass of wine is approximately the same.

Alcohol absorbed through the digestive system finds its way into the blood stream; this blood rapidly reaches the lungs, where the alcohol divides itself between the breath and the membranes of the lung in a specific proportion (using the partition coefficient from science). The alcohol in the breath that fills the breathalyser is therefore a tell-tale indicator of the amount of alcohol in the blood stream. The measure in the blood stream at normal body temperature is given the term blood alcohol concentration (BAC); the legal BAC for many states in the USA is 0.08%.

The BAC is affected by whether alcoholic drinks are taken on an empty or full stomach, the time taken to sip or guzzle the drink, as well as the weight and gender of the drinker. The female body has less water than the male of the same weight and her BAC shoots up higher with the same drink. A male weighing around 160 pounds, drinking at the rate of a beer every 20 minutes, could acquire a BAC of .08% in 2 hours; a further 5 hours may be required to metabolise every trace of that alcohol out of his system.

To those who feel that they can "hold their liquor well," it must be emphasised that the BAC is a measurement of alcohol in the blood stream, and of likely impairment, and not a measure of how much alcohol one can tolerate. Tolerance is defined as a state in which the person no longer responds to a certain amount of alcohol or some other drug, and a higher dose is required to achieve the same effect. Dependence, on the other hand, is a state in which the person functions normally only in the presence of alcohol or other drug; such a person experiences a physical disturbance when the drug is removed, as with withdrawal symptoms. Alcohol with breakfast therefore suggests a lurking problem.

Alcohol decreases the activity of the nervous system and disinhibits brain circuits that are normally inhibitory. [Sexual behaviour increases but sexual performance declines!] Thinking skills are the first to be impaired, but walking and keeping one's hands steady are somewhat resistant to the effects of alcohol at first.

The growing popularity among youth of mixing alcohol and energy drinks could surely make alcohol more palatable, depending on chemicals in the energy drink, but could seduce them into high-risk drinking that could provoke assaults, date rape, alcohol-related injuries, and motor vehicular crashes. Recently released ongoing research by Ferreira and others, in a journal titled *Alcoholism,* points out that the energy drinks may

provide only the perception that the depressant effects of alcohol have been reduced; the expected BAC is however not reduced by the presence of the energy drink.

For those who have been waiting with bated breath on the introduction of the breathalyser, there is hope that a suitable legal BAC would be selected for Trinidad and Tobago, to specifically reduce the loss of lives on the road. Bartenders, given training, should also realise a new civic responsibility for citizens' arrest, by preventing high-risk drivers from leaving their establishments. Offenders should be compelled to participate in detailed drug education programmes on the menace they could cause society by driving while intoxicated (DWI).

School of Education, UWI, St. Augustine