

HAIR ALCOHOL TESTS: HOW TO MAKE SURE YOUR CLIENT DOES NOT HAVE A BAD HAIR DAY

A hair divides what is false and true.
Omar Khayyam

In the words of the great Gil Grissom “I tend not to believe people. People lie. The evidence never lies.” The fear that CSI may have turned us all into keen but amateur forensic scientists has spawned serious academic research into the effects of such programmes on jurors in the US. At least some of that research suggests that CSI fans are likely to approach forensic evidence in a more questioning way. Committed fans of Grissom will recognise the importance of another thought of his: “I’m wrong all the time. It’s how I get to ‘right’ ”

I had a recent opportunity to look at the interface between forensic test results and the family justice system when I was instructed by Trimega Labs as intervenor in a case before Moylan J reported at LB Richmond v B [2010] EWCA 2903 Fam <http://www.familylawweek.co.uk/site.aspx?i=ed71271> .

Hair tests for alcohol are relatively new to the legal arena by comparison with fingerprints, DNA, blood tests etc but they have a respectable 10 year history and a sound science base. The alcohol hair testing industry is not regulated but self-regulated. It governs itself through the Society of Hair Testing whose board is made up of an international group of experts. All the main testers in the UK are members of the Society . In 2009, the Society met and agreed that certain cut-off levels should be adopted to show whether or not a person has been drinking to *excessive* levels. The level where a person’s drinking is deemed to be excessive is taken from World Health Organisation research and literature as 60 gm of alcohol a day (about 7.5 units, nearly a bottle of wine or 2.5 pints of strong lager).

HAIR COMES THE SCIENCE BIT

Blood or urine tests can directly show the presence of ethanol but only for a period of hours after its ingestion. Blood can provide information covering a longer time frame – 4-6 weeks – when liver damage if present - may be detected – but not everyone who drinks will have liver damage and not everyone with liver damage drinks.

Hair tests for alcohol do not directly test for ethanol but for two types of alcohol marker: Ethyl Glucuronide (EtG) and Fatty Acid Ethyl Esters (FAEEs). A number of labs in the UK test for EtG – only Trimega Labs currently have accreditation to test for FAEEs. EtG is a water soluble, incorporated into the hair through sweat. Over time it may be washed out of hair so it has a relatively limited shelf life. FAEEs are fat-loving and are much less sensitive to hair treatments and washing. Both types of marker may remain in the hair for a period of many months, hair growing at approximately 1cm a month. Hair tests results are a more reliable indicator that ethanol is present in the body than blood tests.

The SOHT recommends that hair samples of 3 cm are taken and that in respect of FAEEs the cut-off recommended for a 3cm sample is 0.5 nanograms per milligram (ng/mg). For EtG cut-off levels of 30 picograms per milligram (pg/mg) are applied. 1 nanogram is 1000 picograms so for EtG the cut-off in nanograms is 0.03ng/mg (and for FAEEs 500pg is the equivalent of 0.5ng).

THE NILE REALLY IS A RIVER IN EGYPT

In the case, test results for EtG from another lab were reported as showing alcohol use by a mother who was claiming to be abstinent and in recovery. Not only that but it was reported that her drinking in a given 1 month period was at a specific level (between 20-50 units a week). The mother's denial of alcohol use in the face of this caused the usual undermining of her relationship with the professional network (addicts and former addicts are for understandable reasons always treated with a high degree of scepticism at the best of times) and caused the addiction specialist to doubt her ability to maintain abstinence.

The subsequent FAEE test done by Trimega Labs covering the same period was reported as being negative and showing abstinence or virtual abstinence (albeit it was not a zero reading but well below cut-off levels). In fairness, the standard literature which accompanied their original test results did suggest that the FAEE markers would only be detected when a subject had consumed alcohol. That literature was very quickly revised to make it plain that 'zero results may not be returned even by teetotallers because ethanol is present in all hair .. these traces are the product of the environment, the metabolism of certain foods and cosmetics.'

When the labs were originally instructed to carry out the tests they were simply asked to do so by using the standard forms supplied by both of them. Further questions were then put to the labs to seek clarification and in due course two experts met to discuss the issues and deal with a number of questions put by the lawyers. Further written reports were commissioned and eventually full oral evidence was heard by Moylan J. At paragraph 22 he summarises the upshot of that evidence:

- Hair tests should only be used as part of the evidential picture – the higher the level above cut-off the more significant they are likely to be. However, they should never be viewed in isolation;
- Hair tests should always be commissioned for both FAEE & EtG;
- Hair tests should not generally be claimed to demonstrate anything more than consistent with excessive alcohol use or not consistent with alcohol use. Below the cut-off for excessive alcohol use they are consistent with abstinence or social drinking and cannot be used to prove abstinence or drinking;
- Cutting the hair into 1cm segments does not yield reliable results (you cannot just take the cut-off for 3cm and divide by 3 because the markers are not evenly distributed in the hair and there is not yet a Society approved cut-off for 1cm segments)

In other words, the absence of evidence is not evidence of abstinence and the evidence of abstinence may not be what it seems!

For the moment, the tests are good to show that someone has been drinking an average of 60gm a day in a 3 month period (it makes no difference whether the subject drinks daily or in binges). There are already respectable opinions within the industry that lower levels than the Society cut-off may not be consistent with abstinence but until these figures and the accompanying research have been subject to greater scrutiny they are probably not yet good enough on a stand-alone basis for a court of law (which is not to say that they lack *scientific* validity).

PRACTICE POINTS

- Do some background research on the tests and the scientific background – Professor Pragst has written a number of academic papers which repay reading. The labs have good materials on their own websites – Trimega has run a webinar and will run more involving myself among other specialist family lawyers.
- Always commission both FAEE & EtG tests. Lest you think you may be helping your client by opting for the slightly less reliable test ie EtG you will not be. It was the EtG test in this case which suggested alcohol use. In any event some pesky representative for the LA or Guardian is likely to insist that both tests are done and it is what Moylan J approved.
- Use the case to argue with the LSC if they start being awkward about payments
- Make sure you get reasonably regular update tests in cases where it is particularly important that the professional and expert assessors remain satisfied about abstinence / low drinking levels.
- Question any test where monthly segments are used particularly if they are reported as showing alcohol use.
- Encourage the use of a range of tests (including urine and blood) if it is especially important to show abstinence (as far as it can be shown). It will help to build up an overall evidential picture.
- Look for other evidence which tends to support abstinence / low drinking levels – regular and sober attendance at contact and professionals’ meetings, lifestyle changes sustained, absence of the sort of behaviour that was associated with clients’ past drinking behaviour. I know of at least one case where sensible lawyers simply ignored an out of kilter test result because the subject was living in a residential unit with 24/7 supervision when the test was interpreted as positive for excess drinking (a segmented test result).
- When first commissioning a test ensure that full information is given on the form to accompany the sample as to the use of any hair products or medication
- When reading the standard literature accompanying test results make sure to read all of it (and the small print) – the labs are doing their best & Trimega keeps its literature under constant review – but they are trying to strike a difficult balance between scientific accuracy and keeping the message clear to a non-scientific audience.
- If you are going back to the test provider to ask more questions make sure to follow the Expert Practice Direction in respect both of reports and meetings.
- Consider instructing an independent expert to comment on report results. In the particular case the Judge was satisfied that Professor Pragst, the leading international toxicology expert called by Trimega Labs, acted as an independent witness, notwithstanding his association with Trimega Labs. However, there are a number of expert biochemists / toxicologists with no association to any lab and who are UK-based which will make them easier to access. The LSC is not likely to wear flying in international experts when a home grown one is on the doorstep.
- Ensure that any addiction specialist instructed understands the tests and the importance of treating them as part of the evidential picture. It may be advisable to quote from the Moylan judgment and / or to emphasise the other parts of the evidential picture which tend to support a contention of not drinking.