

Testing Testing: Hair Alcohol Tests in the Family Courts

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I should say at the outset of this article that I was Counsel instructed by Trimega Labs as intervenors in the recently reported decision of Moylan J LB Richmond v B [2010] EWCA 2903 Fam – <http://www.familylawweek.co.uk/site.aspx?i=ed71271>. This is one reason why I have become interested in the science behind the testing and the place of the test results in the family court process.

The need for testing of drinking levels may seem obvious to family lawyers; where residence and contact issues are concerned it is estimated that there are about 1 million children in the UK with at least one parent drinking more than the hair test cut-off level of 7.5 units a day. Last year Childline reported 5,700 calls from children concerned about their parents' abuse of drugs or alcohol. Recent research suggests that 1 in 4 drinkers exceed safe limits. Domestic violence is another big driver with a third of all cases being alcohol related, about 350,000 per year.

Government guidelines recommend that men should drink no more than 21 and women no more than 14 units of alcohol a week. 21 units is approximately 10-11 pints of beer a week and 14 units is about 10 small glasses of wine. These figures are controversial – even the members of the RCP who produced them admit they were 'plucked from thin air'. The focus of these guideline drinking limits is, of course, because of the effect on *health* of drinking. The World Health Organisation considers that we should be concerned about drinking more than 60g of alcohol per day – roughly 7.5 units a day (less than a bottle of wine a day or 2.5 – 3 pints) Drinking this amount is most likely to lead to difficulties in *social functioning* and parenting.

Traditional methods of monitoring alcohol use have included blood and urine tests. These tests still offer some useful information but they have several drawbacks. The window of detection with urine is very low – the past 36 hours maximum – and with

blood some 4–6 weeks. It is not practical to set up daily urine testing and such tests cannot provide any long-term information. Blood tests results can also be misleading because positive results may be obtained for reasons unrelated to drinking or related to past drinking (because it is liver damage which is detected) and a large percentage of heavy drinkers will not have any liver impairment so that a negative result does not reliably rule out even excessive drinking.

Hair tests for alcohol are relatively new – but they have a 10 year history and are based on extensive research. Professor Pragst, an advisor to Trimega Labs and renowned international expert, has pioneered much of this research. There is no imposed regulation on test providers (although there are a number of international standards & accreditation requirements imposed on laboratories). The industry has set up a self-regulatory body – the Society of Hair Testing – <http://www.soht.org/> and Professor Pragst is a board member as is Hans Sachs (a founder member of SOHT) who is a member of Trimega's newly appointed Advisory Board. The Society has a wide international membership and meets regularly to discuss aspects of hair testing for drugs and alcohol. At an important meeting in July 2009 in Rome, the SOHT agreed guidelines – http://www.soht.org/pdf/Consensus_EtG_2009.pdf – in relation to testing for alcohol markers and specifically agreed the cut off levels, which should be used, above which one can safely conclude that someone is drinking to excess.

There are two main tests available to test hair for alcohol. Each test identifies chemicals in the body that are only found in hair when ethanol has been present in the body – generally this will only happen when alcohol itself has been ingested. I say generally because it is important to note that in rare circumstances it may be that ethanol by-products will be found in hair samples provided by teetotallers, perhaps because of the production of alcohol in the body as a result of eating certain products or because of environmental contamination. That said, in general terms, the presence of the markers in the hair of teetotallers is rare and usually only detected

at very low levels. The significance of this in a legal context is that it is not currently and never likely to be possible to use the hair test to prove abstinence although there will be results that can be said to be consistent with abstinence and it may be possible in future to conclude from them that abstinence can be ruled out on a balance of probabilities.

The two markers which can be tested for are 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 substance and is incorporated into the hair mainly through sweat. It is an accurate marker particularly when used to look at a subject's short term drinking history, by this I mean 3 months. However, because of its water soluble characteristic any hair which is subjected to a normal regime of washing, shampooing etc is going to suffer a wash-out effect so that in theory false negative results may be more likely.

Unlike the highly water-soluble EtG, FAEEs are not hydrophilic (water-loving) but lipophilic (fat-loving) and are therefore much less sensitive to cosmetic hair treatments such as frequent washing.

In order to provide the court with the best information the ideal is to commission tests for both EtG and FAEEs and this practice was specifically approved by Moylan J. By doing this you ensure the greatest possible degree of accuracy because the relative strengths of each test compensate for the possible shortcomings of the other. An example of this is analysing hair from a subject who may have lost a significant amount of weight in the period of time running up to the test. It is known that significant weight loss can lead to misleadingly high FAEEs results. The use of the two tests together should ensure that the maximum number of accurate results is given, particularly in any case with readings close to the cut-off level.

The SOHT recommends that hair samples of 3 cm are taken and that in respect of EtG cut-off levels of 30 picograms per milligram (pg/mg) are applied. In respect of FAEEs the cut-off recommended for a 3cm sample is 0.5 nanograms per milligrams (ng/mg). It is right to say that there is perfectly credible scientific justification for using a slightly lower level of cut-off for EtG but SOHT has concluded that a higher level is used to have the greatest confidence that positive results are not false. Readings above the cut-off levels therefore mean that a family court can confidently conclude that a subject has been drinking more than 60gm of alcohol a day on average (6-7 bottles of wine, 20 pints).

What the test results cannot do is to discriminate between those who distribute their drinking during the week and those who drink in binges, particularly at weekends or – for the moment at least – to discriminate reliably i.e. to a good enough standard for court purposes between those who are abstinent and those who are social drinkers. However, the test results can also be described as consistent with abstinence or perhaps more properly put as *not evidence of drinking*. Below the cut-off for excessive drinking it is not possible to say that a reading of say 15pg/mg equates to drinking 30 grams of alcohol – the correlation is not linear either for EtG or FAEE. EtG tends to be more concentrated in the section of hair closest to the scalp whereas FAEE tends to pool at the end of the hair. In other words, neither substance is evenly distributed.

In the particular case in which all this was considered by Moylan J, a situation arose which may be all too familiar to family lawyers. The mother had a long-standing alcohol dependency. She claimed to have given up drink altogether. Hair tests were regularly commissioned and one particular test, said to relate to one particular month, came back from Trichotech which was reported to indicate that she had been drinking in that month. Trichotech had adopted a practice – commonly used in relation to drug testing – of using one centimetre segments of hair to represent one month in time and dividing the cut-off by 3. They interpreted the result which was above 10pg/mg as indicative of alcohol use. This has the all-too predictable effect of causing the local authority to lose confidence in the mother's veracity and reliability and as a result they would not agree that she could care for her children. Had the tests been reported by Trichotech in accordance with SOHT guidelines they would have had to say that the results did not provide evidence of drinking.

The Judge was understandably critical of some of the literature produced by both laboratories which had not helped the lawyers to understand and interpret the test results. What became clear from the case is that we lawyers have tended to interpret the tests in a very black and white way and to assume that the tests can reliably tell us exactly how much someone is drinking rather than that someone is drinking excessively. He emphasised the need to instruct test providers in the same way as any other expert i.e. by following the Practice Direction. He accepts that in many cases chemical test results are treated as factual assertions and not opinions but there will be situations in which interpretation is required particularly where the results are at the margins. I do not take him to mean that every request for a hair test needs a complicated letter of instruction that if assistance with interpreting the results is needed, the Practice Direction should be observed. An alternative,

of course, is to instruct an expert who is entirely independent of the test providers themselves.

The Judge's other conclusions were in summary: –

Hair tests should be seen as one part of the overall evidential picture;

Where hair tests are undertaken, tests for both FAEE & EtG should be done;

The tests can only support findings that the results are consistent with / indicative of excessive drinking – below cut-off they can be said to be consistent with either abstinence or social drinking and they cannot show how much someone may have been drinking;

Tests involving 1cm samples should not be used as they cannot be said to produce reliable evidence of excessive drinking.

It may be tempting to think that there may be an advantage to the client to maximise the likelihood of a false negative by requesting an EtG test alone. This has clearly been disapproved by Moylan J but in any event it was the EtG test result which caused the problem in this case, being interpreted as positive for drinking some alcohol. The FAEE results provided by Trimega were negative for excess drinking, consistent with abstinence although not wholly probative of it.

It is difficult to gauge how many cases may have been effected by the incorrect interpretation of hair tests but family lawyers should review any case in which segmenting has been used or unlikely results are received and consider whether to ask for re-testing and / or FAEE testing, particularly where the test results seem to be out of synch with the overall evidential picture and the client is insistent that no alcohol has been drunk. An incidental practice point is that it is important to fill in the form which accompanies the sample accurately so that the lab has full information about any hair products used, medication taken or extreme weight loss which may affect the results.

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.

ChatBack are truly making a difference!

Those who attend the 2010 ALC Annual Conference will no doubt remember the opening performance and film from ChatBack Productions. This group was set up in 2007 by fostered teenagers and foster carers' birth children aged between 11 and 18.

In 2008 they won a Philip Lawrence Award in for their DVD '*Fostering Reality*' and they were involved in all aspects of the films production, including writing and editing. At the conference they presented their latest release, '*Handle with Care*', covering the topic of domestic violence.

The group are continuing to go from strength to strength and their current activities include:

- Getting funding from Children in Need for their current project – making a film/on-line educational tool for teachers about LAC in education.
- Performing at fostering network in London – they have created a new piece, reportedly very funny, which tells how the young people in ChatBack have influenced services.
- Performing in Warwick for Orange Grove fostering
- Talking to the psychologist conference in Worcester.

They are also in mid flow of a bid to do a musical – the like of which has never been seen!!! They will continue to keep us informed and now have 25 young people in the group.