
Drugs of abuse testing – in brief

OPINIONS

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Testing for drugs of abuse is a complex task, and pitfalls abound. The Norwegian Association of Clinical Pharmacology is now launching a series of educational videos to disseminate fundamental knowledge about this topic.

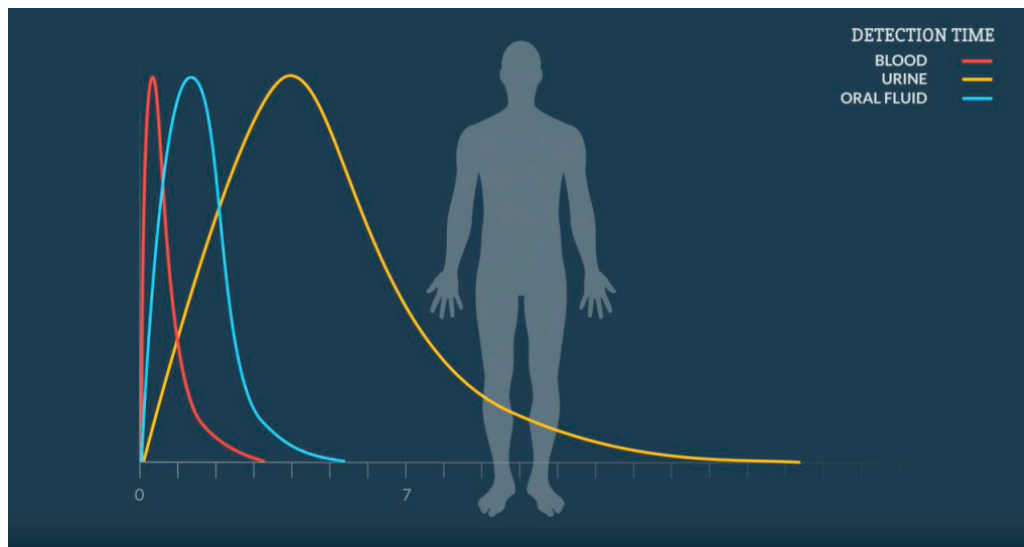


Figure 1 Screenshot from video no. 1 on the detection time of various drugs of abuse in various specimens. Source: Norwegian Association of Clinical Pharmacology

Testing for drugs of abuse involves analysing biological specimen, such as blood, urine, oral fluid or hair, to detect intake of drugs. More than 40 laboratories in Norway provide such services [\(1\)](#), and we estimate that around 400 000 unique samples are tested for drugs of abuse annually. In addition, there are also rapid on-site tests for drugs of abuse [\(2\)](#), and although no figures are available for such analyses, the extent of testing is assumed to be large. The purpose of testing may be either medically motivated (for example to diagnose an unconscious patient or monitor a drug-addicted patient who is undergoing treatment) or legally motivated (for example child custody evaluation or investigation of unnatural causes of death). In some cases, the justification may be less clear and reside in the grey zone between medical and legal issues. The group of requisitioners is diverse and ranges from drug rehabilitation centres, hospital departments and general practitioners to child protection services, the police, courts of law, correctional services, the Armed Forces, corporate health services and prisons.

Drugs of abuse testing is a complicated discipline. Correct application requires fundamental knowledge about the pharmacological properties of the various drugs, sources of error in collection and handling of samples, the performances of the analytical methods and the legal regulations for drugs of abuse testing [\(3\)](#). Without such knowledge, or easy access to it, the requisitioner may have difficulty in deciding what kind of test procedure will be appropriate for the test situation in question. The requisitioner's deliberations must include which specimen type to use, the frequency of testing, which substances to test for and whether the sample should be collected under observation or not. Unfortunately, we often see that requisitioners are insufficiently informed about drugs of abuse testing, for instance, when inappropriate analyses are ordered or when the specimen type is unsuitable for the issue at hand. Another example is when the test result may give rise to legal sanctions, but the sample collection and

handling fail to comply with the requirements for such samples. This situation may be even more complicated, because the requisitioners themselves do not necessarily perform the interpretation and management of the test results.

There is a lot of written information on the correct procedures for drugs of abuse testing, in academic articles, government manuals/regulations and on the web pages of the laboratories. The challenge, however, is that these texts are often comprehensive, and the requisitioner's time is limited. Thereby, the texts function mostly as reference works. In some cases, requisitioners who need a quick explanation of the principles for drugs of abuse testing choose to call the laboratory. Such phone calls may be useful, but not very efficient in terms of resource use, when taking into account the number of different parties in need of such information. We have therefore identified a need for a simple and user-friendly learning tool that can be of help in this context.

The Norwegian Association of Clinical Pharmacology (NFKF) is now launching the video series *Drugs of abuse testing – in brief*. The videos are designed according to a genre known as *animated infographics* or *explainers*. They should have high visual and technical quality, yet be brief enough to fit into the busy schedules of the requisitioners when needed. Each of the three videos lasts approximately three minutes and addresses general principles of drugs of abuse testing and specific issues associated with testing for alcohol and cannabis respectively. The videos have been produced with support from the Central Norway Health Authority innovation programme and are available on YouTube (4) and the website of the Norwegian pharmacology community, the Pharmacology Portal (5). We hope that they will be frequently viewed and that they will help make drugs of abuse testing a little more comprehensible to all those who are involved in it.

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Publisert: 25 February 2019. Tidsskr Nor Legeforen. DOI: 10.4045/tidsskr.18.0920
Received 27.11.2018, first revision submitted 10.12.2018, accepted 17.12.2018.
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