Random Alcohol & Drugs Testing for Airline Pilots:

Why Not?

Dr. Ries Simons, M.D.

Consultant Aerospace Medicine TNO

Chairman Advisory Board European Society of Aerospace Medicine (ESAM)

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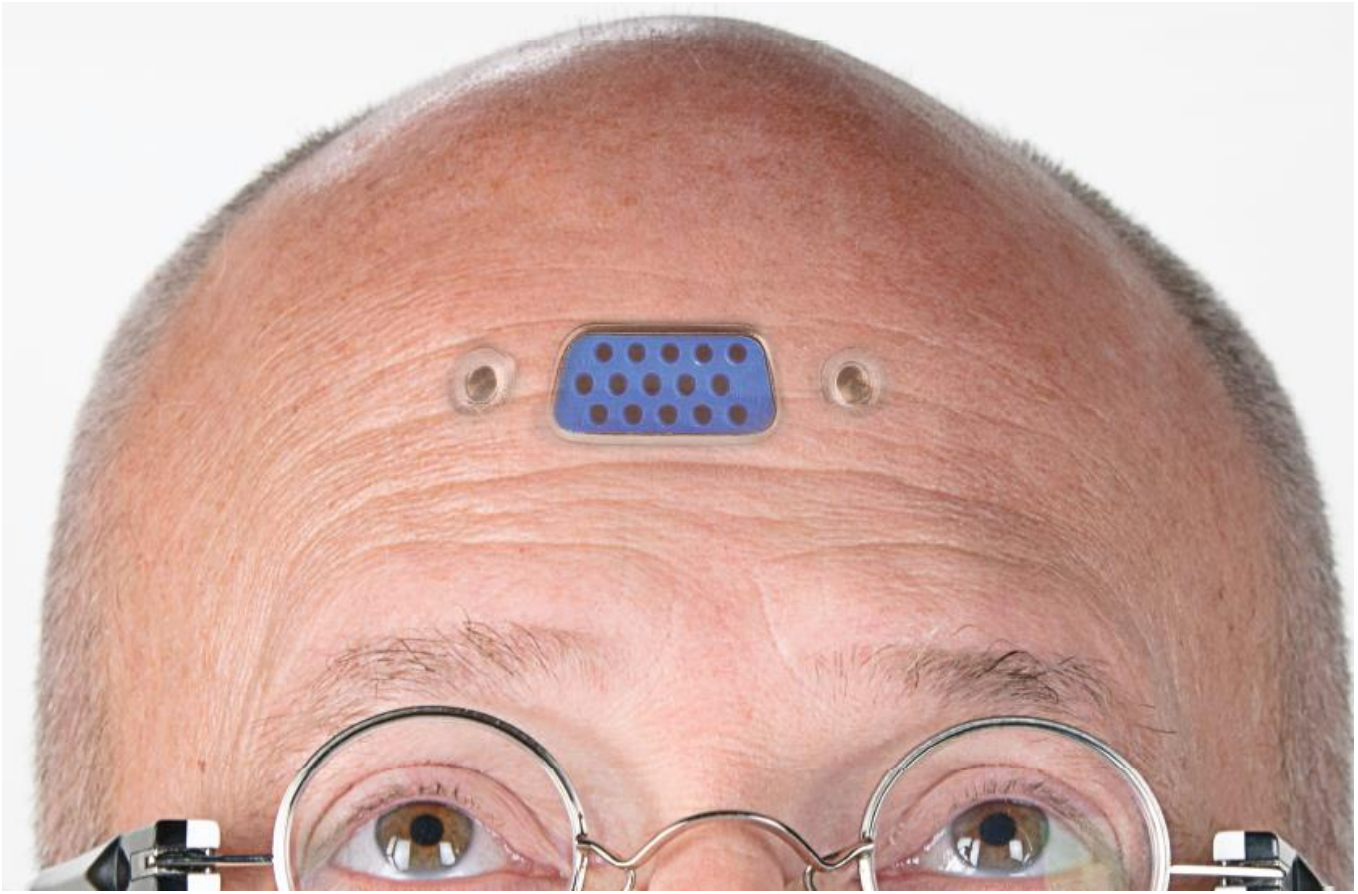
EASA: seeking for methods to identify alarm signs and symptoms of ‘problematic’ mental health of pilots

EASA - Background and reasoning of the Task Force

‘The use/abuse of drugs and alcohol is one of the few disorders that has the potential to affect the mental health of pilots, for which screening by means of biochemical tests is available’

Until this ESAM-prototype pilot is fully operational . . . .



We have to use available data, professional skills, and our brains

Random Testing

1) ‘No-notice’ testing of individuals who are randomly selected from a group. Employers must use a truly random selection process and each employee must have an equal chance to be selected and tested. The selection of employees for random drug testing should be made by a scientifically valid method such as random number table or a computer based random number generator.

2) ‘No-notice’ testing of an individual at randomly selected times during his/her employment. This form of random testing is used to check for abstinence from alcohol or drugs of individuals who have been treated for problematic use of alcohol or drugs or for individuals who are suspected to (have) use(d) drugs or alcohol.

The case for D&A testing is convincing for:

- ✓ Post-accident
- ✓ Post-severe incident

} Detection of causal/contributory factors

- ✓ With due cause (on suspicion) → Prevention of problems, Clearing of suspicion
- ✓ Random follow-up after treatment → Demonstration of sobriety

Random testing of a population (pilots) is highly controversial.
In some States it is prohibited by law or public policy

Random Testing: PROs

- Deterrent effect on the decision to ingest performance impairing substances (for occasional users but not for addicts [ICAO, 1995])
- Minimal selection bias and uses an objective method
- Keeping politicians / public happy (‘One is one too many if it’s my pilot’).
- Follow-up Random testing is a valuable tool in the context of alcohol and drug treatment and rehabilitation programmes

Random Testing: CONs

- Little robust evidence on the deterrent effects [Australian Safety and Compensation Council, 2007].
- Use of alcohol or illicit drugs is very rare as a causal or contributory factor to accidents in which airline pilots (Class I) are involved [Canfield et al., 2012].
- Very low cost-effectiveness: yield/effect vs costs, operational problems (logistics, replacement of crew)

Prevalence rates of alcohol violations by occupation among U.S. major airline employees with safety-sensitive functions, 1995-2002 (Li et al., 2007)			
Occupation	Number of Random Tests	Number of violations	%
Flight Crew	108,407	29	0.03
Flight Attendants	142,068	82	0.06
Flight Instructors	2,944	2	0.07
Aircraft Dispatchers	15,678	13	0.08
Maintenance Personnel	200,602	173	0.09
Aviation Screeners	22,537	15	0.07
Ground Security Coordinators	18,461	13	0.07
Air traffic Controllers	1,048	2	0.19
TOTAL	511,745	329	0.06

2006-2014: mean annual violation rate 0.106%

[data retrieved from Federal Registers 2007-2015- DOT, USA]

US Aviation Industry Drug Testing 2001 (all safety-sensitive personnel)			
Type Test	Total Tests	Total Positives	Rate %
Random	117,339	694	0.59*
Reasonable Suspicion	288	27	9.4
Post-Accident	460	9	2.0
Pre-Employment	136,862	2,047	1.5

*Not counting refusals

Violation rates for drugs highest for maintenance personnel (1.00%) and aircraft screeners (1.16%) and lowest for flight crew (0.05%) [Li et al., 2011]

CASA: Random testing 5% of safety sensitive personnel per year

Sep 2008 – 2012:

29,192 alcohol tests + 22,443 drug tests = 51,635 random tests.

41 People caught, with 13 later cleared of any wrongdoing

(= 28 positive for alcohol + drugs together).

Yield 28/51635 = 0.05%.

28 positive tests: none in ATPL pilots

Random Testing: CONs

- Drug tests provide information about recent use of drugs, but do not identify substance use disorders or physical dependence
- A test for psychoactive substances other than alcohol does not provide evidence of current impairment
- Random testing may help drive problems underground and can undermine Peer Support Programs [Büringer, 2015]

Random Testing: CONs

- Significant false positive rates caused by use of prescription/OTC medication, food (e.g. poppy seed!), environmental contamination (e.g. THC), and methodological limitations.

False positive results:

22% of opioids, 46% methadone, 21% amphetamines,

61% benzodiazepines, 12% cocaine, and 21% marijuana

identified as positive on screening tests but negative on laboratory tests using Liquid Chromatography-Mass Spectrometry [ASAM, 2013].

Unfair penalty for operator and pilot where the ignition test was a false positive (pilot grounded for several weeks [CASA, 2006])

Random Testing: CONs

Some 400 products to defraud or ‘beat’ random testing are marketed on the Internet and in drug-culture magazines

Random Testing: CONs

No possibility to screen for

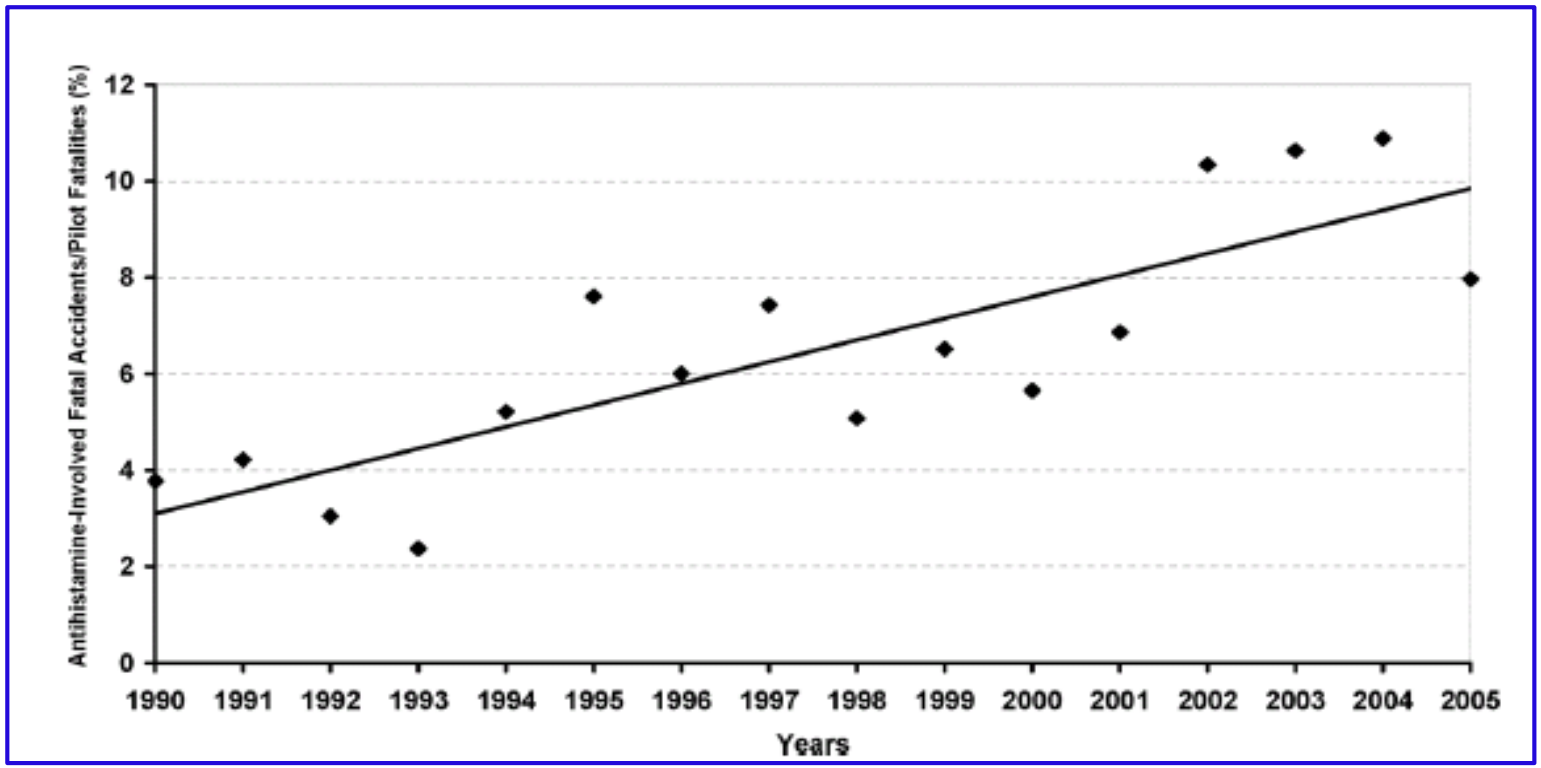
- residual effects of alcohol
- (ab)use of prescription/OTC medication

TNO Survey (302 short-haul pilots)

[Simons & Krol, 2003]

	hypnotic drugs	prescription drugs	OTC drugs
percentage of pilots	7.5	22.5	37.5
potentially harmful to flight safety (% of total)	1.3	13.8	5.0

Antihistamines in Pilot Fatalities [Sen et al., 2007]



Sedating antihistamines (OTC) were used by 9.8% of 6,677 pilots

[National Transportation Safety Board. 2014. Drug Use Trends in Aviation: Assessing the Risk of Pilot Impairment. Safety Study NTSB/SS-14/01. Washington, DC]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BY MARK THOMPSON


CURRENTLY ON
EXIT 58A-B
95
1
Zoloft
9
Prozac
Paxil
LAST EXIT BEFORE TOLL
Buspar
Wellbutrin
Celexa
Xanax


PROZAC
NOW IN HOLIDAY STRENGTH

Approved for pilots: Sertraline, citalopram, escitalopram

citalopram, escitalopram, and sertraline carry warnings about aggressiveness, agitation, hostility, impulsivity, irritability, mania, suicidality (in first few weeks of use)

Therefore consider each case on an individual basis

- Stimulate safety awareness of aircrew and doctors concerning alcohol, drugs (illicit, prescription, OTC), life style, and medical conditions that may impair flying performance
- Educate Doctors and Pilots
- Aim: make pilots and doctors critical to the use of any drug and to consult their AME/AeMC in between mandatory medicals when needed

Education and Training of pilots:

- Start at flying schools
- Use initial Class 1 medical assessment/screening for education
- Repetition at regular intervals during career

Conclusion – Random Testing

Arguments PRO:

- Random testing of groups may have a pro-active deterrent effect on the decision to ingest performance impairing substances (?).

- **Follow-up Random testing is a valuable tool in the context of alcohol and drug treatment and rehabilitation programmes**

Conclusion

Arguments CON:

- Very low detection rate (especially in flight crew) compared to high costs and operational problems
- Limited range: limited percentage of employees will be tested each year and only few substances are covered in the standard test procedures
- May lead to hiding mental problems including problematic substance use and this might lead to the progression of disorders to more severe stages

Conclusion [Quoting Büringer, 2015]

A comprehensive prevention and intervention program for mental health problems including substance use disorders will not gain further effectiveness by adding random controls. Contrarily, there is a danger that voluntary action by pilots and staff will be reduced.

Random Alcohol & Drugs Testing for Airline Pilots:

No Thank You

There are more effective methods to prevent and identify problematic mental health, including misuse of performance impairing substances