Occupational exposure of midwives to nitrous oxide on delivery suites

In our opinion, the article “Occupational exposure of midwives to nitrous oxide on delivery suites” is in need of some remarks. Many years ago, when N\textsubscript{2}O in urine was first evaluated, we frequently observed “unusual” concentration of N\textsubscript{2}O in samples of exposed and unexposed subjects. The phenomenon was kept under control and disappeared when urine samples were treated with a small quantity of H\textsubscript{2}SO\textsubscript{4} (0.2 ml). For this reason, we suggested the following. \textsuperscript{1}–\textsuperscript{3} Approximately 10 ml of urine were collected from all the subjects at the end of the exposure period in 120 ml gastight glass vials with airtight plugs. The vials contained 0.2 ml sulfuric acid in order to avoid the in vitro production of N\textsubscript{2}O (probably due to microflora activity). \textsuperscript{1}–\textsuperscript{3}

Another point we consider very important is the subjects must void the bladder rapidly in areas known to be free of nitrous oxide, otherwise a significant contamination of samples can occur. In conclusion, we think that among the simple precautions that should be taken to avoid significant errors (avoiding collection of urine samples in places contaminated with N\textsubscript{2}O, carrying out collection rapidly, and using airtight collection vials in order to avoid any major loss of dissolved anaesthetic), one point should be emphasised in view of its importance: storage of urine before analysis can produce an endogenous formation of N\textsubscript{2}O originating from the oxidation processes of the nitrogen compounds present in biological liquids. Experiments performed to study this phenomenon have shown that the process is inhibited if the urine is kept acid. If, as a precaution, a few drops of strong acid are added to each collection vial before urine samples are collected, neformation of nitrous oxide will be avoided and the urine samples may then be stored as long as required prior to the analysis.

M Imbriani
Università degli Studi di Pavia Dipartimento di Medicina Preventiva, Occupazionale e di Comunità, Pavia, Italy
S Ghittori, L Maestri
Lab-Meia, Fondazione Salvatore Maugeri IRCCS, via Ferrata, B, Pavia, Italy
Correspondence to: Dr S Ghittori; sghittori@fsm.it
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The evidence for workplace counselling is in Medline

Henderson et al point out the increasing approval of counselling as an effective intervention to treat or prevent the effects of stress at work by British judges, although they could use expert advice on this matter. \textsuperscript{4} In reaction to this development, they pose the rhetorical question: where to find evidence on the effectiveness of counselling. In stead of answering this question they grasp the opportunity to criticise the report of the British Association for Counselling. \textsuperscript{5} I totally agree with their criticism of the report. It is of low quality and does not provide reliable evidence on the effectiveness of counselling. However, I was surprised by the fact that the authors did not present reliable evidence that does exist on the topic. The question cannot be left unanswered. We gave an answer to an almost similar question in our article on evidence in a freezer was approximately the same for each sample. Despite this 24 midwives had zero N\textsubscript{2}O in their pre-shift samples and 22 had non-zero values, of whom 12 had very high values. The period between deposit in a freezer and analysis varied between samples but biological activity should not occur in the freezer.

I Matthews
Department of Epidemiology, Statistics and Public Health, University of Wales College of Medicine, Heath Park, Cardiff CF14 4XN, UK; matthews@cf.ac.uk

References

Author’s reply
Professor Imbriani and colleagues report experiments which showed that endogenous formation of N\textsubscript{2}O was inhibited if urine is kept acid. The convenience of adding 0.2 ml of sulphuric acid to vials recommends its routine use in practice and we do not disagree with this recommendation. The likelihood that the pre-shift urine measurements which we reported arise from this phenomenon rather than other factors should be judged in the light of the following considerations:

- All pre-shift urine samples were collected in areas free of nitrous oxide.
- The period between sample collection and deposit in a freezer was approximately the same for each sample. Despite this 24 midwives had zero N\textsubscript{2}O in their pre-shift samples and 22 had non-zero values, of whom 12 had very high values.
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References
In 400 pages the author covers most of what there is to know about the wider world of stress and has usefully interwoven a number of relevant themes. I was surprised how little mention was made of the medica-

Tolley’s managing stress in the workplace


“Not another book about workplace stress”—emanating in this case, from the “stress industry” would be an understandable reac-
tion. Carole Spiers, the author, unequivocally describes herself as an “occupational stress consultant” and head of the Carole Spiers Group: “International Corporate Well-being Consultants”.

She faces up to the implications immedi-
ately by asking “Why indeed another book about stress? What makes it different from the others?” Well, this one is intended to be practical and user-friendly—a handbook that can sit on your shelf and act as a reference manual to be dipped into whenever required. It is aimed primarily at employers, employ-
ees, and their representatives rather than occupational health practitioners or academ-
cies; it is not a criticism—many occupa-
tional health practitioners will appreciate the way in which the subject of work related stress is assiduously presented in all its complexity.

Far from being all about the practicalities of managing stress in the workplace, there are chapters which go into some detail about the nature of stress, current legislation, and the health and safety framework in the UK and, to some extent, Europe. Naturally there has to be constant reference to health and safety and employment law but also to civil litigation, and here comes one of the prob-
lems: very few cases of work induced stress have in fact been litigated and those that have, not in many people’s view, been very typical. Moreover, this is a fast chang-
ing field and the useful synopsis of appeal cases heard in 2001 and act as a reference

References


EURATOM, 13 May 1996.

4 The Ionising Radiations Regulations 1999 (UK statutory instrument).

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Notice

28th ICOH International Congress on Occupational Health

The 28th ICOH International Congress on Occupational Health will be held in Milan, Italy, 11–16 June 2006. Further information:

www.icoh2006.it

Tel: +39 0250320110; fax: +39 025032011

Email: sabrina.braiati@unimi.it

Correction

With reference to the paper “Risk of selected birth defects by maternal residence close to power lines during pregnancy” (Blaasaas KG, Tynes T, Lie RT. Occup Environ Med 2004;61:174–6), the authors state:

“The total number of births inside the specified corridor given as 128 680 in the Results was wrong. We verified, however, that only 42 223 pregnancies were completed on specific addresses inside the corridor. These 42 223 births represented the cohort from which we identified the 465 cases and selected 930 controls. This should have been specified in the paper. The error gave a wrong impression of the prevalence of defects but had no implications for the results of the paper.”

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