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9th Newsletter

Dear colleague:

Dec. 6th, 1987

This year's Santa Claus has good news for you: this world could hardly do without you! At least that is what I conclude from an article entitled "Neurobehavioral Testing of Chemicals: Impact on Recommended Standards" which was written by our club member W. Kent Anger (Neurobehav. Toxicol. Teratol. 6, 1984, 147-153). Out of 588 chemicals listed by the TLV committee of the American Conference of Governmental and Industrial Hygienists (ACGIH) in 1982, none less than 167 were assigned workplace exposure standards because they exhibit a neurotoxic potential (sometimes along with other health hazards). Even though one has to bear in mind that the Threshold Limit Values (TLVs) promulgated by the ACGIH are primarily only recommendations, they have a large impact upon industrial 'practice. For the one part, this is so because these recommendations were quantitatively adopted by the the Occupational Safety and Health Administration (OSHA) in 1971, thereby making them legally binding. For the other part, they function as guidelines in cases where no OSHA standards are available as yet.

I think that this paper is of great value to those of us who are interested in applied neurotoxicology and, more specifically, in occupational health. It is much more than just a compilation of neurotoxic substances: it demonstrates that most of the neurotoxic insults are directed to the CNS (narcotic effects: 28 chemicals; CNS depression: 10 chemicals; nervousness: 11 chemicals), to the motor system (37 chemicals), and to the visual system (33 chemicals). These findings open up perspectives as to what the most sensitive systems are, and where one should look first when a compound is suspected to be neurotoxic. Departing from my conception that except for channel toxins, the degree of neurotoxicity depends mainly on the relative amount of toxin invading the nervous system as compared to other organs or compartments, I am asking myself whether so many substances are predominantly neurotoxic, or if neurotoxicologists just happen to dispose of the most sensitive methods to detect performance decrements. Whatever the right answer is, it is the successful regulation of toxic substances which really counts in the end. And this brings me to my next point.

A brand-new book on neurotoxic hazards at the workplace

On behalf of the WHO, a book entitled "Prevention of Neurotoxic Illness in Working Populations" was published by WILEY this year. It holds contributions from 50 authors, among them 4 INA members: W.K. Anger, R. Letz, and D. Otto, and B.L. Johnson who was also the editor. It's first section reviews the literature on organic solvents, metals, agricultural chemicals, noxious gases, irritants, new chemicals, chemical interactions, and drugs at the workplace. Instrumental and statistical methods used in various studies are also mentioned. The second section describes the so-called "consensus recommended methods" referring to epidemiology, neurobehavioral and -physiological testing, diagnosis and treatment. The third section addresses the possible strategies to prevent neurotoxic

illness in workers. The most important options are education, engineering controls, better work practices, and material substitution. It also points out gaps of knowledge. The fourth section comments on the previous ones.

What makes this book different from other compilations? It reminds us that health problems in the industrialized countries look small as compared to those of the developing countries where millions of people get into extensive contact with agrochemicals, or work in small-scale enterprises with low hygiene standards. Prevention needs - among others - detection of early signs of neurotoxic disorders. In the third world, however, tests do not only have to be sensitive and reliable, but also simple and affordable. Along that line, WHO has put a lot of effort into the development of standardized methods and educational material.

Order spare copies of the abstract book now!

A couple of abstract books from the "1st INA Meeting" in Lunteren are still available. Those of you who missed this conference might like to order a copy from Jacob Hooisma, Medical Biological Lab. TNO, P.O.Box 45, NL-2280 AA RIJSWIJK, The Netherlands. Please enclose a cheque of 40 Hfl with your order to cover printing expenses.

There is not much I can say about the proceedings which were due to appear this autumn as a supplement to TOXICOLOGY. A week ago, I got a note from the editor saying that my contribution was accepted. Obviously, somebody is working on it, and so it seems quite likely to me that it might be published this winter.

The upcoming 2nd INA meeting:

The first steps are currently being taken by our scientific committee to draw an outline of the scientific programme. It looks like we were going to have a specialty session on sensory neuron toxicity, and may-be another one on behavioral toxicology co-organised by the Behavioral Toxicology Society (BTS). This will be decided upon next spring. Our local organising committee in Barcelona, Spain, has started to look around for a nice place to hold the meeting. On behalf of both committees; I would like you very much to fill in the enclosed questionnaire. Your response will be of great help in their planning activities.

Other meetings:

The Medical Institute of Environmental Hygiene is planning another neurotox minisymposium to be held at Mickeln manor, Duesseldorf. It is scheduled for the 26.-30. September of next year. In contrast to it's forerunner, neurobehavioral toxicology will not be the main concern. Rather would we like to stress the manifold interrelations between neurotoxicology and neighbouring disciplines. We feel that important contributions have been made from researchers who are not primarily toxicologists, and that the conception of neurotoxicology has to be broadened. Especially when it comes to prenatal. or long-term low-dose exposures in humans, it is hard to get along without the help from epidemiologist who designs the study, the biochemist who quantifies internal exposure, the neurologist who measures performance decrements, the psychologist who applies neurobehavioral tests, and finally the neurophysiologist who looks for the mechanism of action in an in-vitro model.

As only limited funding will be available, most of the invited speakers will have to be from European countries. Otherwise, the conference is open to anybody, the only restriction being limited accommodation facilities (40-60 participants). The conference language will be English. Anybody wishing to contribute or participate should turn to either Herbert Wiegand or Gerhard Winneke using the address given above.

Further meetings in 1988:

- May 5-27: 7th International Training Course in Toxicology.
Subjects: Toxicol. of heavy metals, occup. safety and health
in mining and metalurgy. Place: Belgrad
Registration: Inst. of Occupational & Radiological Health.
Clinical Center of the Medical Faculty.
11000 Belgrad, Deligradska 29, Yugoslavia.
- Sept. 4-8: 11th Annual Meeting of the European Neuroscience Association.
(Sept.7-8: joint meeting with the annual meeting of the
European Brain and Behaviour Society)
Place: Zuerich. Deadline for Abstracts: March 15.
Registration: University of Zuerich-Irchel, Switzerland
- Sept. 19-22: German Society for Pharmacology and Toxicology,
Autumn Meeting. Place: Hamburg. Fee: 150.-DM
Registration: CPO Hanser Service, P.O.Box 1221,
D-2000 Hamburg-Barsbuettel.

Before I close, I would like to remind you again that you should keep me current on your travel plans and recent developments in your professional life, so as to allow for a continuous flow of information among members.

Merry Christmas and a happy New Year!