



STATE UNIVERSITY OF NEW YORK AT STONY BROOK  
Health Sciences Center - School of Medicine  
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*F. Letter*

Psychopharmacology — EEG  
Laboratory

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April 2, 1975

P. H. Van Oot, M. D.  
The University of British Columbia  
Department of Psychology  
2075 Wesbrook Place  
Vancouver, B.C.  
Canada, V6T 1W5

Dear Dr. Van Oot,

It is good to hear that seizures and seizure therapy are still of research interest.

Your finding of increased tonus in successive seizures is consistent with the experience that repeated seizures are followed by a lowering of the seizure threshold. When current factors are held constant, successive seizures exhibit prolonged duration. Spinal fluid acetylcholine levels rise and the characteristics of the seizure change so that the post-seizure EEG shows longer and longer silent periods. The interseizure EEG becomes slower in frequency and higher in amplitude, and the duration of persistent slowing is directly related to number, frequency and intensity of seizures. Thus your observation is a facet of the oft-described neurophysiological consequences of repeated induced seizures. I trust that in your report, you present data for varying intensities of currents, and varying numbers of seizures.

It is not possible to comment on the interaction of alcohol and induced seizures. Your note suggests the finding was a surprise. Surely, reference to the CNS effects of seizures and of alcohol should make synergism a possibility. Fortunately, such synergism (if indeed it exists) is not common in clinical practice. One would hope, should you pursue this line of inquiry, that you would carefully specify number and frequency of ECS; dose of alcohol; and the time factors.

My principal reason for answering is to comment on the tone of anthropomorphism in your letter. Rats are not ~~new~~. It is a potentially unfortunate extrapolation to speak of "dangerous interaction" and to join ECT, alcohol addiction and dependence in one complex, unclear sentence.

*MEN.*

April 2, 1975

I cannot recall citations relevant to the question of alcohol and ECT, although there are anecdotal reports of ECT used successfully in opiate and alcohol addicts. I have not examined this combination directly.

For references you may seek the studies of George Winokur in alcoholism and depression; and Ferris Pitts in ECT.

I can recommend the volume, "*Psychobiology of Convulsive Therapy*", (V. H. Winston, Washington, 1974) and the January, 1972 issue of *Seminars in Psychiatry* as sources of review of the neuro-physiology of ECT.

Sincerely yours,

Max Fink, M. D.  
Professor of Psychiatry

MF:ed