

phase 1 mdma research update

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THE HARBOR-UCLA PHASE I MDMA research study is nearing completion. After fifteen months of comprehensive investigation, only three additional subjects remain to be evaluated. Acute physiological and psychological reactions to MDMA have been measured, as have long term effects on central nervous system function. Although final analyses of collected data await inclusion of our remaining subject group, to date we have observed overall responses to the effects of MDMA administration to be within the safe and acceptable range in normal volunteers pre-screened to exclude those with significant medical or psychiatric disorders.

MDMA's risk/safety profile

As the issue of MDMA's relative safety has once again achieved prominence and notoriety in recent news publications, under such lurid headlines as "Ecstasy Found to Cause Brain Damage," it appears to be pertinent and timely to once again comment on the issue of MDMA's relative risk/safety profile. Whereas our subjects were administered MDMA assayed to be 99.8% pure, what passes for the drug "on the street" is assuredly not always what it is purported to be. And although our volunteers are subjected to the rigors of a medical research unit setting, they are assured of intensive monitoring of their physiological and psychological status and control of extenuating factors which may influence acute response to the drug. Indeed, observations of some of the basic physiological parameters measured do point to the need for users of MDMA to maintain vigilance regarding their personal health and safety.

Physiological effects

Two areas in need of mention are the measured reactions of body temperature and blood pressure to MDMA administration. We have observed, particularly with the higher range of MDMA dosages we have administered, a mild elevation of core body temperature during the first few hours of the drug's

effect. Given the occasional reports of apparent MDMA induced fatal hyperthermia, particularly in the British medical literature, our observations lend further credence to the need for MDMA users to take necessary preventive measures to minimize dehydration and exposure to environments with excessively high ambient temperature. Our second observation pertinent to the question of MDMA's relative safety has been a mild yet persistent elevation of blood pressure, particularly during the "peak" period of the drug's effect. While not of such magnitude as to be injurious to individuals in good health, these changes to both systolic and diastolic blood pressures may put individuals with preexisting cardiovascular disorders at some risk. Furthermore, the potential dangers of drug interactions must also be raised in this context, as the combination of MDMA with a variety of prescription and over-the-counter drugs is known to exert more severe effects on blood pressure. Although our findings reinforce the importance of pre-screening MDMA users, monitoring environmental factors which could affect vital signs and avoidance of particular polypharmacy regimens, it should also be noted that many (if not most) drugs used in contemporary medical practice similarly possess risks and inherent dangers if used unwisely.

Central nervous system effects

Our work at Harbor-UCLA examining the effects of MDMA has also involved intensive scrutiny of central nervous system response. Our design has been to study neuropsychological testing profiles, neuroendocrine challenge assays, SPECT (single photon emission computerized tomography) scans and MR (magnetic resonance) spectroscopies. The latter two investigational technologies, SPECT scans and MR spectroscopies, have yielded particularly valuable information. Although detailed description of these findings must await inclusion of data from our remaining subject group, it appears from preliminary analyses that at least some of the MDMA users we have studied do exhibit significant differences in brain function, as measured by the procedures we have utilized, when compared to control subjects recruited for similar evaluation. [See back cover of this issue.] Given the degree of medical attention and consequent public concern aroused by the specter of "neurotoxicity," however, we believe it is essential to employ caution in interpreting such findings. Indeed, it is far from certain that if such changes as we are observing are replicated with further studies, that in fact they will prove to be evidence of "brain damage."

For the past decade, discussion of MDMA's central nervous system effects has been dominated by reports on laboratory animals of serotonergic axonal degeneration. By labeling such findings as "neurotoxic," and interpreting the significance of subsequent evidence of axonal regeneration in an entirely negative light, comprehensive and impartial assessment of MDMA's potential for salutary effect has been impeded. There is no doubt, as laboratory findings reveal, that MDMA may exert profound effects on the brain. That these effects will inevitably lead to adverse clinical outcomes, however, is far from proven. Similarly, the possibility that such alterations in brain function may be the substrate for therapeutic change has neither been proven nor explored. The only means by which we will be able to determine the full range and implications of MDMA's effects in humans is through diligent, objective and open investigation. It will only be then that we will fully establish MDMA's risk/benefit ratio, and clarify its potential for injurious effect versus its inherent capacity to facilitate healing and positive change.

Acknowledgements

Special acknowledgment needs to be accorded the volunteer subjects of the Harbor-UCLA Phase I research investigation of MDMA, who have generously given their time and energy to this study. Each has had to make multiple visits to the Medical Center for the many evaluations essential for a study of this type. The procedures they have had to endure, from physical examinations, psychiatric interviews and neuropsychological testing, through SPECT scans and MR spectroscopies, to their three experimental drug sessions, have been a demonstration of their tremendous commitment, persistence and stoicism. Without their dedication to this project, it would not have been possible to collect the valuable data necessary to achieve our task of rigorously and openly exploring MDMA's range of effects.

Request for funding support

Funding for the Phase I MDMA study was obtained from the Harbor-UCLA Research and Educational Institute, MAPS and individual donors. In these days of decreasing allocations of government funding for all scientific research, it has not proved possible to obtain the level of grant support standard for investigations of this sort. Indeed, given the controversial history surrounding MDMA, the reticence of federal agencies to provide funding has come as no surprise. Nevertheless, given the great need to learn more about this unique drug, which has been the object of self-experimentation by millions of individuals in the United States and Europe and about which unfortunately so little is truly known, it is our intent to actively pursue additional investigations. Vital public health and safety questions persist and necessitate definitive answers, new areas of potential application in the treatment of disorders and conditions refractory to conventional therapies need to be explored. In order for this work to continue, however, additional funding must be obtained. It is our fervent hope, indeed our expectation given the gravity of these explorations as we approach the final years of this century, that such support will be made available. It will only be then, with the continued generosity of our donors and dedication of our subjects, that the critical questions which remain before us will be answered. •

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