

Some Comments Concerning Dosage Levels Of Psychedelic Compounds For Psychotherapeutic Experiences

GARY FISHER

SUGGESTIONS FOR DOSAGE are best made for initial experiences, since an individual's receptivity and sensitivity to drugs is so variable that only experimentation with various dosages can determine for any individual the amount of drug that he will require for any particular experience desired. At the outset it should be made clear that this writer does not consider dosage to be the crucial factor in the experience the subject will have. Factors such as the individual's fear of self-exposure; his need to maintain a favorable impression of himself at all times; his willingness to learn; his ability to "go with" changing states of consciousness; the rigidity of belief patterns; the amount of insecurity about his personal worth; his preparation and intent as he goes into the session; his trust in individuals in general and particularly his confidence in the people with him; the wisdom of those who share the experience with him; and the persistence with which he defines himself — all these factors, and many more, are the crucial ones in determining the kind of experience an individual will have with the psychedelic compounds.

In spite of such a host of conditions, however, we have found that dosage does help or hinder the operation of these factors. Another word of caution: a particular dosage does not guarantee a particular reaction. The variability of response to the drugs is enormous, largely because what is most important for a particular person to learn at a particular time will vary tremendously, and thus the experience will differ accordingly.

The comments here offered concerning dosage are considered an integral part of the philosophy of psychedelic treatment outlined

Dosage Levels of Psychedelic Compounds

elsewhere (e.g., Blewett & Chwelos, 1958; Chwelos, Blewett, Smith and Hoffer, 1959; IFIF, 1963; Leary, 1962; MacLean, MacDonald, Bryne & Hubbard, 1961; Savage, Terrill & Jackson, 1962; Sherwood, Stolaroff & Harman, 1962; Van Dusen, 1961; Watts, 1962). Briefly, the treatment philosophy has as its goal a radical change in personality structure, with attendant changes in values, goals, motivation, beliefs and behavior. This sought-for change is characterized by the individual's developing an attitude toward himself which enables him to begin to experience himself and the world about him in a positive, creative manner in which he assumes total responsibility for his own state of being. Sherwood, Stolaroff & Harman (1962) state:

The concept underlying this approach is that an individual can have a single experience which is so profound and impressive that his life experiences in the months and years that follow become a continuing growth process. . . .

There appears to emerge a universal central perception, apparently independent of subjects' previous philosophical or theological inclinations, which plays a dominant role in the healing process. This central perception, apparently of all who penetrate deeply in their explorations, is that behind the apparent multiplicity of things in the world of science and common sense there is a single reality, in speaking of which it seems appropriate to use such words as infinite and eternal. All beings are seen to be united in this Being. . . .

Much of the "psychotherapeutic" changes are seen to occur as a process of the following kind of experience:

The individual's conviction that he is, in essence, an imperishable self rather than a destructible ego, brings about the most profound reorientation at the deeper levels of personality. He perceives illimitable worth in this essential self, and it becomes easier to accept the previously known self as an imperfect reflection of this. The many conflicts which are rooted in lack of self-acceptance are cut off at the source, and the associated neurotic behavior patterns die away. (p. 77)

It must be remembered that the impressions conveyed concerning the efficacy and characteristics of the various drugs come from the writer's experience with them and contain all the biases and prejudices inherent in any clinician's working model. The material is presented in the spirit of sharing experience gained in working with the psychedelic compounds in order to offer guideposts to those new in the field, and to offer the experienced some additional information on dosage and on technique of treatment.

THE PSYCHEDELIC REVIEW

Pre-treatment medication:

If the session is to be run in the morning and if the subject is particularly apprehensive, it is wise to give him some mild bedtime sedative. The main reason for this is to prevent a restless and fitful night where he remains in a twilight sleep and where the cortical activity is very fast and fragmented.

We have found it wise for the individual to eat very lightly the day before his session and to have an especially light dinner the evening before the session day. If he can spend this day quietly, in peaceful surroundings with his guide (guru, therapist) and session mates, this is excellent. The subject should not eat the morning of the session, and he should also abstain from juices and coffee.

If the subject is apprehensive in the morning, and if this apprehension persists or is unusually severe, the subject should be instructed to take early morning medication. We have found librium to be a very useful drug at this stage. It should be noted that it is highly improbable that an individual will not have some degree of anxiety preceding a first psychedelic session. Indeed, in this writer's experience, it is only the very chronically psychotic individual who will show no demonstrable anxiety prior to a session. What is specifically referred to here is undue anxiety which is debilitating and which interferes with the functioning of the individual to the extent that a snowball phenomenon is initiated, wherein he becomes anxious and his anxiety makes him more frightened until he loses all perspective about the forthcoming experience. When this occurs, or it seems likely to occur, we have found it most effective to abort the reaction by early medication with librium. The dosage depends on the individual's sensitivity to drugs. Our usage of librium has been from 10 mg to 35 mg. A person's sensitivity to drugs can be roughly gauged by his sensitivity to other drugs. For instance, some people need $2\frac{1}{2}$ grains of aspirin to ease a headache whereas others need 15 to 20 grains. Individuals' sensitivity to drugs varies tremendously. For example, given an equal amount of psychological rigidity and resistance (clinically estimated), we have seen two individuals vary in drug requirements by a ratio of 1 to 10 (e.g., one individual being able to have a certain degree of experience with $25\mu\text{g}$ LSD, whereas his clinically controlled partner required $250\mu\text{g}$).

If the individual does not have undue anxiety in his early morning hours, we then recommend giving 10 mg to 20 mg librium as the first drug in the session. Ten to fifteen minutes later 5 mg methedrine

Dosage Levels of Psychedelic Compounds

is given, followed 20 minutes later by psilocybin. The dosage of psilocybin again varies, but our range for first session experience has been from 6 mg to 16 mg. Twenty minutes following the administration of psilocybin, LSD-25 is given. Again the dosage varies, but the most effective range we have found is from 300 to 500 μg . The effect of this staggered dosage is to ease the subject gently into the state of fluid expanded consciousness. One of the effects of librium is to relax the musculature so that any somatic effects the subject begins to have from the psilocybin will not be imposed on a rigid, tense and therefore painful musculature system. If the body can become relaxed, loose, pliable and comfortable, then any somatic effects that emerge from the psychedelics will be experienced in a comfortable soma which will lead to an acceptance of these effects, rather than a resistance to them which would occur in a tense organism. Resistance results in the experiencing of pain, either somatically or psychically. When the organism is in a fluid state, impinging or emerging somatic changes take place and are experienced in this pleasant somatic setting. One very effective technique is to massage the individual early in the session. With quiet, relaxing music, soft lighting and comfortable, secure session mates, a very slow, deliberate body and head massage brings the individual into a relaxed, protective and nurturing environment, in which alarm and panic are hard to manufacture.

The methedrine serves to stimulate and activate the individual in this warm setting. Some individuals respond with too much thought activity to amphetamines, and if this can be determined prior to the session, then the methedrine should be omitted. With most people, however, this small amount of methedrine serves to produce an effect of heightened interest and fascination with the panorama of experiences that begin to come into consciousness. We have found the use of psilocybin prior to LSD to be beneficial in that psilocybin has a smooth, mellow, affectual tone. The initial effects are subtle, more gradual and more manipulatable than LSD. These techniques are all in the service of minimizing the likelihood of the individual's becoming overwhelmed too quickly with his changing state of consciousness, attempting to abort the reaction and becoming panicked when he is unable to do so. *Every precaution should be taken so that the individual does not attempt to shut off the developing consciousness expansion.* By the time the LSD begins to take effect, the individual has become relaxed, has begun to enjoy the increased sense perceptions and has become fascinated with the world of awareness

THE PSYCHEDELIC REVIEW

that is beginning to open to him. The deep and profound experiences released by the LSD then flow uninterrupted, in an ever widening scope.

Adding drug during the session:

We have experimented with boosting with various drugs and with various dosages and time intervals. To date, our recommendation is that, given an initial adequate dosage, boosting is to be avoided. The primary reason for this attitude is as follows: the individual will learn first what he needs to learn first, and boosting is often the result of a prejudiced set of the guide as to what the subject should be learning or experiencing. Secondly, boosting often indicates to the subject that it is the drug, after all, that is going to do the work (an attitude which we believe is to be avoided at all costs) and that the guide has lost faith in the individual's ability to work out his own resolutions to his conflicts and problems. Another important facet is that the individual often will take a stand early in the session concerning what he is willing and what he is not willing to do, and will stick to it despite efforts of the guide and despite boosters. Often this taking of a stand or position and sticking to it is a very important experience for the subject as he learns so deeply what and where his commitments get him, and has the opportunity to translate this experience into daily living so that he can see the fruits of his daily attitudes.

If the guide decides to boost, however, then we recommend that he use *at least as much as the initial dose of LSD* and that the boosting be done within the initial three hours. That is, if the individual has been given 350 μg LSD, then he should be boosted with an additional 350 μg , and it is preferable that it be given i.m. In our experience it is expedient to give a booster if the individual becomes completely entangled in an area in which he is in a circular bind wherein he is incapable of perspective and of conceiving any alternative solutions to his conflict. This usually involves some decision-making in which the individual sees that all old attitudes and patterns of behavior leave him with unsatisfactory solutions. In these cases the individual simply bounces from one old reaction pattern to another, without benefit. The solution is then outside the person's limit of entertained possibilities. In these cases, additional drug may be helpful to get him out of his bind, so that heretofore unimagined answers are forthcoming. Some experimenters who have had experience using dimethyltryptamine in these instances

Dosage Levels of Psychedelic Compounds

where additional drug is indicated, state that the use of this drug in quantities of 50 mg to 60 mg i.m. is very effective.

We have also found it useful to give librium when the individual gets into extreme states of agitation which pyramid, and from which there is no release — in terms of time, we would consider 40 to 50 minutes of extreme agitation and distress to be beyond the point of therapeutic usefulness. Librium used i.m. in dosages of from 50 mg to 100 mg is very helpful in allaying the extreme agitation and anxiety without bringing the individual out of the consciousness-expanded state. Librium in this respect is better than thiorazine, the latter to be used when one wishes to terminate a session. This writer has found it necessary to terminate sessions on infrequent occasions. Dosage of from 25 mg to 100 mg is usually sufficient.

We have also found it helpful to use both librium and methedrine in the latter phases of sessions. Sometimes after a thoroughly exhausting emotionally charged session, it is difficult for the individual to orient himself to various "levels" of experience and phenomena, especially to the level of "usual" consciousness. Individuals may go from one level to another quite rapidly, trying to understand or rationalize these various levels, but to no avail, since the endeavor is premature. At these times we have found it helpful to use methedrine in dosages of 5 mg to 10 mg. This has the effect of smoothing out the experience and keeping the individual in a more expanded consciousness state for a longer period of time and with a gradual lowering of this expanded consciousness over an extended period. When the individual is becoming more integrated in his experience, we then use librium again in dosages from 10 mg to 25 mg as a relaxant and for a gradual soothing and calming effect. Often if there has been somatic tension during the day, this dosage of librium helps to loosen up, relax, and make the individual more comfortable.

Use of Psilocybin:

It is this author's opinion that it is not desirable to begin an individual's psychedelic experiences with psilocybin. The reason for this is that psilocybin does not have as great a potential as LSD for breaking through the resistances to expanded states of consciousness. It is best to use the most potent material available to increase the probability that an individual will be able to overcome his resistance and attain a state of cosmic (expanded) awareness. Psilocybin, al-

THE PSYCHEDELIC REVIEW

though a powerful psychedelic, does not have the breadth of power of LSD. The experience of getting involved and encumbered with one's old, inadequate, value system or uncreative basic assumptions about life is to be avoided, and the most powerful agent to break these attitudinal sets is to be used when available. Dosage requirements are always to be viewed against this philosophical framework. If LSD is not available for an initial psychedelic experience, dosages of from 50 mg to 70 mg psilocybin are recommended. For initial psilocybin experiences following LSD experiences, dosages of 15 mg to 30 mg are usually sufficient.

Use of Mescaline:

Since this writer has had limited experience with mescaline, the reader is referred to Unger's (1963) review for detailed information. Low dosages of mescaline are considered to be in the range of from 100 mg to 200 mg, whereas for a standard psychedelic experience, dosages from 500 mg to 800 mg may be used. Dosages in excess of one gram are to be avoided because of toxicity. When mescaline and LSD are used together, the recommended dosage is: 200 mg to 400 mg mescaline with 100 μ g to 300 μ g LSD. Opinion differs with respect to the subjective effects of mescaline: some find it smoother, more mellow and giving a more prolonged descending experience than LSD, whereas others find it harsh, rough and producing unpleasant somatic effects.

Unger (1963) states:

Although the conclusion was delayed by both dissimilarities in their chemical structure and differing modes of introduction to the scientific community, it is now rather commonly adjudged that the subjective effects of mescaline, LSD-25, and psilocybin are similar, equivalent, or indistinguishable. (p. 112)

That the gross subjective effects are similar, no one would dispute. But it is this writer's impression that there are many distinguishing subjective differences among the drugs. Unger's conclusion stems mainly from experimental subjects who had limited experience with each drug. In those subjects who have had considerable experience with all three drugs, it is commonly reported that, rather than being indistinguishable, there are many distinctive experiential characteristics of each drug. This writer is not familiar, however, with any research where experienced subjects have attempted to specify which of the psychedelics was given to them in a blind trial.

Dosage Levels of Psychedelic Compounds

Table 1 gives dosage levels (low, standard and high) and lethal dose for the drugs, LSD, psilocybin and mescaline.

TABLE 1
Dosage Levels for Some of the Psychedelic Compounds

Drug	Low Dosage	Standard Initial Psychedelic Experience	Highest Known Given to Man	LD 50 mg/kg*
LSD	25 μ g - 75 μ g	300 μ g - 500 μ g	1600 μ g	Mice: iv 50 Rats: iv 16.5
Psilocybin	2 mg - 8 mg	20 mg - 40 mg	120 mg	Mice: iv 285
Mescaline	100 mg - 200 mg	500 mg - 800 mg	1500 mg	Mice: ip 500

*LD 50 mg/kg: Median Lethal Dose; 50% of subjects expire with this dosage expressed in milligram per kilogram of body weight.

Use of small dosages with experienced subjects:

This writer has often noted that experienced subjects tend to restrict themselves to a dosage level which they have found will induce a psychedelic experience. It is our opinion that this level is often unnecessarily high, and we suggest that experienced individuals experiment with smaller dosages. It is common experience that a subject finds that he needs a smaller amount of material to induce a psychedelic experience after he has had a few experiences with the larger dosage levels. However, individuals will often continue to use dosages of from 100 to 200 μ g LSD. It is hypothesized that as dosage is decreased, variables of the environment and the clarity of mind prior to the session become increasingly important. Consequently, prior to small dosage sessions, a period of meditation is highly useful to enable the individual to relax and to clear his consciousness of irrelevancies. Dosages as low as 10 μ g to 25 μ g LSD or one mg to two mg of psilocybin have been found to produce rather amazing states of expanded consciousness.

THE PSYCHEDELIC REVIEW

Use of small amounts of drugs for an initial experience:

One approach to be used with very anxious and frightened subjects will now be discussed. This approach can be used with any individual, of course, but with the majority of individuals it is not necessary and not even desirable. The main disadvantage of this approach is that it can build up resistance and make the desired breakthrough into cosmic consciousness more difficult. If, however, an individual is extremely apprehensive or frightened at the prospect of the psychedelic experience, and yet psychedelic treatment is indicated, small amounts of drug in a specially created atmosphere can be most helpful. Dosages of from 25 μg to 75 μg LSD are suggested, and for some subjects who are extremely drug-sensitive, even smaller amounts may be used. The idea is to create a hypnotic-like atmosphere in which the subject thoroughly enjoys himself and begins to experience his sense modalities to their fullest possible limits. It is better with this approach to have the subject with just one guide, rather than the two or four session mates employed with the larger dosages. This guide is very active in producing and directing a comfortable, relaxed and enjoyable experience. There should be absolutely no interruptions, and the subject should be assured of this before the session begins. Special attention is paid to the decor of the room, with soft lighting and pastel shades predominating. A simply appointed room with selected objects is best. These objects are selected according to their artistic and aesthetic value. Objects with various combinations and values of color, shape and texture should be selected. Objects which have been found to be most useful are: a single flower (a red rose, a pansy, a sunflower, a violet), fresh fruit (one orange, one banana, one nectarine, a small bunch of grapes), whole grain bread and cheese. Music, of course, is most useful, and attention should be paid to the subject's favorite selections and composers. The music of Wagner, Sibelius, Saint-Saens, Richard Strauss, Liszt, Chopin, Mozart, Tchaikovsky, Mahler and Grieg is suggested. Other forms of music are also very helpful for mood change, such as Indian music, progressive jazz, Gregorian chants, Negro spirituals and the Blues. Simple figurines are useful — some made from wood and others from stone. Delicate perfumes and incense can be employed, and precious jewels are excellent. A variety of textures should be made available to the subject. Laura Huxley's record, mentioned in her book, *You Are Not the Target*, is an especially good one to play during the session, as she creates a beautiful, ecstatic and safe world for the

Dosage Levels of Psychedelic Compounds

psychedelic voyager to explore. Any stimulus which will enhance the subject's completely experiencing his senses should be employed.

The guide presents these objects to the subject and helps to call his attention to the beauty of each object. In this respect it is very beneficial for the guide to take a small amount of the drug himself so that his state of expanded awareness can be shared by the subject. The guide's enjoyment of his surroundings entices the subject into the guide's world, and the more the guide is able to reach a state of ecstatic wonder, the more he can share experiences available to the subject. The guide goes about to create a state of beauty and delight to the subject—with any method at his disposal.

Somatic changes can be dealt with by having the subject communicate their first occurrence to the guide, who then suggests, perhaps in a hypnotic-like manner, that the subject gently, then thoroughly, experience these sensations as pure sensation and take the label off the sensation (e.g., pain) and simply experience it as it is. In this way the subject ceases to resist the somatically experienced sensations, and they then become delightful phenomena and cease to be painful. (Pain, either physical or psychical, is always caused by resistance to some naturally occurring phenomenon.)

The purpose of the whole experience is for the person to *learn* to experience himself and the things about him with fulfillment and joy. Having a good time and experiencing beauty *is* therapeutic. This approach is to help the individual to release his tensions, to experience his body in a delightful way, to enjoy music, to see vivid colors, to absorb works of art, to eat fruit and bread, to look at trees, flowers — to be in awe of beauty. This is a good introduction to psychedelics. It is a good introduction to one's guide in a sharing experience. In this setting the guide must be an active participant, a constant companion, and a directing initiator into pleasant and beautiful experiences.

REFERENCES

- Blewett, D. B., and Chwelos, N., *Handbook for the Therapeutic Use of Lysergic Acid Diethylamide-25: Individual and Group Procedures*. Mimeographed, 1958, Saskatchewan. (In press.)
- Chwelos, N., Blewett, D. B., Smith, C., and Hoffer, A., Use of d-lysergic acid diethylamide in the treatment of alcoholism. *Quart. J. Stud. Alcohol*, 1959, 20, 577-590.

THE PSYCHEDELIC REVIEW

- Huxley, A., *The Doors of Perception*. N. Y.: Harper, 1954. (Reprinted 1962, with Huxley's *Heaven and Hell*, Harper Colophon paperbacks; hardcover edition, early 1964.)
- Huxley, L. A., *You Are Not the Target*. Foreword by A. Huxley. N. Y.: Farrar, Straus & Co., 1963. (The record titles, "Rainbow Walk" and "Your Favorite Flower," are part of a series available from: Recipes for Living and Loving, Columbia Special Products, Box 500, Pico Rivera, California.)
- IFIF, *Tibetan Manual for Ego-Transcendent Experience Using Psychedelic Substances*. "Psychedelic Monographs," No. 2, 1963. (In press.)
- Leary, T., How to change behavior. In Nielsen, G. S., ed., *Clinical Psychology*. Proc. 14th Session, Intern. Congr. Appl. Psychol., Vol. IV. Copenhagen: Munksgaard, 1962. [To be reprinted January, 1964, in Bennis, W. G., et al., eds., *Interpersonal Dynamics*. Essays and Readings on Interpersonal Actions. Homewood, Ill.: The Dorsey Press.] Also available from *The Psychedelic Review* as a special offprint, together with Huxley, A., Visionary Experience.
- MacLean, J. R., MacDonald, D. C., Byrne, U. P., and Hubbard, A. M., The use of LSD-25 in the treatment of alcoholism and other psychiatric problems. *Quart. J. Stud. Alcohol*, 1961, 22, 34-45.
- Savage, C., Terrill, J., and Jackson, D. D., LSD, transcendence and the new beginning. *J. Nerv. Mental Disease*, 1962, 135, 425-439.
- Sherwood, J. N., Stolaroff, M. J., and Harman, W. W., The psychedelic experience — a new concept in psychotherapy. *J. Neuropsychiatry*, 1962, 4, 69-80.
- Unger, S. M., Mescaline, LSD, psilocybin, and personality change: A review. *Psychiatry*, 1963, 26, 111-125.
- Van Dusen, W., LSD and the enlightenment of Zen. *Psychologia* (Kyoto), 1961, 4, 11-16.
- Watts, A. W., *The Joyous Cosmology*. Foreword by Leary, T., and Alpert, R. N. Y.: Pantheon, 1962.

Four Psilocybin Experiences

[Phenomenological accounts of spontaneous or induced transcendent experiences are valuable source material for the psychology of consciousness expansion. Each account is different. The range of experiences is as wide as the range of human temperament and outlook.]

Of these four accounts, the first, by Frederick Swain, describes an experience with the original Sacred Mushroom, in Oaxaca.¹ It is interesting to compare the Mazatec Indian ritual with the modern rituals of experiment and therapy. // The second is by an artist who took synthetic psilocybin in a "naturalistic" experiment. // The third is by a graduate student in psychology who participated in the same series of experiments. In addition to the perceptual changes reported in the previous statement, many interpersonal aspects of the experience are emphasized in this account. // The fourth account was written by a prison inmate who took part in an experimental rehabilitation program that used psilocybin.]

I

Primitive religious rituals have always fascinated me, and I have sought them out in my travels whenever possible. A few years ago I heard of the discovery of a new hallucinogenic mushroom in Mexico by the mycologist, R. Gordon Wasson. The religious rituals woven around the mushroom captured my imagination. I decided to investigate at the first opportunity. It was not till last fall that the opportunity suddenly came. I found myself in Mexico hunting for this mushroom, unfortunately with little knowledge of its nature, other than the meager information that it produces strange visions when eaten. I knew also that this species of mushroom grows in the mountains of southern Mexico, and that there is a Curandera (or Shaman) in the village of Huautla de Jimenez who performs religious mushroom rituals.

I went to Mexico City with the hope of obtaining more detailed information before continuing on to the mountains. But those who might have knowledge of the mushroom at the University of Mexico were on vacation. A professor who had experimented with it at the Institute of Anthropology was in Europe. I could not find anyone who had even heard of the mushroom. So I was forced to start out alone by bus to the village, which I located on a map, in the Sierra Mazatec range in the state of Oaxaca.

After a long day's ride we arrived at the town of Tehuacan, where I had to give up my bus for a broken-down outmoded public carrier, loaded with

¹ This account was first published under the title "The Mystical Mushroom" ("El Hongo Místico!") in *Tomorrow*, Vol. 10, No. 4 (Autumn 1962), pp. 27-34. The permission of author and publisher to reprint this article is gratefully acknowledged.