

limit of safety ; most drivers would have their ability impaired at levels of 50 mg./100 ml. or below. The variable effects of food taken with drink, tiredness, minor illness and remedies taken for it, and other factors, including habituation to alcohol, make it impossible to advise any "safe" upper limit for alcohol consumption before driving. The only sound rule remains: Don't mix drink and driving.

## Drug-taking by the Young

Drug-taking by young people in Great Britain has reached serious proportions in the past three years. Though there are no statistics for amphetamines, barbiturates, cannabis (marihuana), lysergic acid diethylamide (L.S.D.), and other non-narcotic drugs, there are some for drugs governed by the Dangerous Drugs Act. These show<sup>1</sup> an increase in addiction to heroin and cocaine. In 1965<sup>2</sup> 145 persons under the age of 20 were known to be addicted to dangerous drugs (heroin, morphine, methadone, cocaine, dextromoramide, pethidine, and others) and confirm an upward trend. A further disturbing finding<sup>2,3</sup> is that larger numbers of addicts seem to be obtaining their supplies from unknown sources. The statistics refer only to the persons known to the Home Office through the scrutiny of prescriptions or because they have committed an offence and are found to be addicted.

The taking of drugs by adolescents in this country first came to notice in the early 1960s, though it is possible that a small nucleus of young people in the Chelsea area of London started the culture pattern in the 1950s and that it had spread more widely by about 1959.<sup>4</sup> Now even children and adolescents still at school have been found taking drugs,<sup>5</sup> and Borstal institutions are likewise meeting the problem.<sup>6</sup> P. H. Connell<sup>7</sup> drew attention in 1958 to the misuse of amphetamine, mainly by ingestion of the contents of inhalers. They were not on a restrictive schedule at that time but have subsequently been withdrawn from the market. Amphetamines in other forms were placed on Schedule IV of the Poisons Rules. Two informative articles in the lay press<sup>8,9</sup> later drew attention to a culture pattern of teenagers which included attendance throughout week-ends at clubs in the West End of London and the abuse of amphetamines and other drugs. Cannabis was also taken, but Drinamyl (an amphetamine-barbiturate mixture) seemed to be the drug of choice. The writers of both these articles were doubtful about the meaning of this behaviour pattern and neither found that heroin was being taken. Sharpley<sup>9</sup> did, however, note the presence of prostitutes, sexual perverts, and narcotic addicts as a small and older fringe group in the same cultural setting as the teenagers. Connell<sup>10-12</sup> has noted that adolescent drug-taking is "culturally determined behaviour, usually occurring at week-ends," that the drugs have become much more easily available in the suburbs and provinces than previously,<sup>12</sup> and that there may be a change from amphetamines towards narcotics.<sup>13</sup>

Apart from the increase in numbers of adolescents taking narcotics their attitude to the subject has changed in that some of them now accept heroin-taking as "with it." Since the number of adolescents consuming amphetamines or amphetamine-barbiturate mixtures is much larger than the present known number of heroin takers, it seems likely that this change in culture pattern will lead to an increase in young heroin addicts.

The drugs now most commonly abused in Britain by young persons in probable order of frequency are amphetamines (and amphetamine-barbiturate mixtures), cannabis, heroin and cocaine, and L.S.D. Possibly the figures for cannabis are larger than those for amphetamines. Adolescents are also experimenting with amyl nitrite, glue sniffing, and barbiturates alone. But these practices are commoner in the United States than here.<sup>14-16</sup>

Little is known at present about the pharmacological implications of regular cannabis-taking. I. Chein and colleagues<sup>17</sup> reported that 86% of a group of heroin addicts in New York City had previously taken cannabis, but they gave no data on people who had used cannabis and not gone on to heroin. P. A. L. Chapple<sup>18</sup> in a retrospective study of 80 heroin and cocaine addicts noted that marihuana was not regarded as a drug of addiction. Cannabis was said to be the most enjoyable drug until they took heroin, in contradistinction to Connell's findings,<sup>11,12</sup> which suggested that many adolescents tried cannabis and other drugs but preferred Drinamyl or amphetamines. But whatever the extent to which cannabis may lead to dependence on heroin and cocaine it may in itself cause harm. T. A. Lambo has recently reported to the World Health Organization that there are cases in West Africa of chronic and acute psychosis which are due to cannabis-taking, and serious adverse effects have also been described from Nigeria by T. Asuni.<sup>19</sup>

Increasing numbers of addicts to other drugs now mention L.S.D., though the so-called psychedelic movement, while it has reached this country, has fortunately not yet attracted large numbers to its ranks. According to S. Cohen the complications of taking the drug<sup>20</sup> include chronic intoxication, schizophrenic reactions, acute and chronic paranoid states, prolonged intermittent psychoses, psychotic depressions, chronic anxiety reactions, acute panic states, and convulsions.

The factors that go to make a drug addict are certainly complex. They include patterns of family relationships and of child rearing, the personality of the individual concerned, adolescent socio-cultural pressures, judicial and social attitudes towards drug-taking, and the availability of drugs. But it would seem that delinquency is not disproportionately high among juvenile drug-takers except for crimes directly related to procuring the drugs.<sup>17,21</sup>

Measures against drug addiction have been discussed in these columns recently<sup>22</sup> and need not be reiterated. But some aspects of the problem of combating the growth of addiction

<sup>1</sup> *Drug Addiction: Second Report of the Interdepartmental Committee on Drug Addiction, 1965.* H.M.S.O., London.

<sup>2</sup> *Hansard*, 30 January 1967, col. 167. See *Brit. med. J.*, 1967, 1, 311.

<sup>3</sup> Bewley, T., *Lancet*, 1965, 1, 808.

<sup>4</sup> — *Brit. med. J.*, 1965, 2, 1284.

<sup>5</sup> *Education*, 3, 10, 17, 24 June, and 1 July 1966.

<sup>6</sup> *Report on the Work of the Prison Department, 1965.* H.M.S.O., London.

<sup>7</sup> Connell, P. H., *Amphetamine Psychosis*, Maudsley Monograph No. 5, 1958. London.

<sup>8</sup> Linken, A., *Sunday Times*, 27 January 1963, p. 24.

<sup>9</sup> Sharpley, A., *Evening Standard*, 3-6 February and 1 May 1964.

<sup>10</sup> Connell, P. H., *Brit. J. Addict.*, 1964, 16, 9.

<sup>11</sup> — *Proc. roy. Soc. Med.*, 1965, 58, 409.

<sup>12</sup> — *Proceedings of the Leeds Symposium on Behavioural Disorders*, 1965. Dagenham.

<sup>13</sup> — *J. Amer. med. Ass.*, 1966, 196, 718.

<sup>14</sup> Lawton, J. J., and Malmquist, C. P., *Psychiat. Quart.*, 1961, 1.

<sup>15</sup> Glaser, H. H., and Massengale, O. N., *J. Amer. med. Ass.*, 1962, 181, 300.

<sup>16</sup> Ackerley, W. C., and Gibson, G., *Amer. J. Psychiat.*, 1964, 120, 1056.

<sup>17</sup> Chein, I., Gerard, D. L., Lee, R. S., and Rosenfeld, E., *Narcotics, Delinquency and Social Policy: The Road to H.*, 1964. London.

<sup>18</sup> Chapple, P. A. L., *Brit. J. Addict.*, 1966, 61, 269.

<sup>19</sup> Asuni, T., *J. Soc. Hlth (Nigeria)*, 1967, 2, 40.

<sup>20</sup> Cohen, S., *Psychosomatics*, 1966, 7, 182.

<sup>21</sup> Scott, P. D., and Willcox, D. R. C., *Brit. J. Psychiat.*, 1965, 3, 865.

<sup>22</sup> *Brit. med. J.*, 1967, 1, 319.

among young people need stressing. Not least among them are legislation and adequate staff to bring drugs under full control in shops and warehouses, from which many thefts are occurring. Clearly the general public must be educated to understand that drug-taking is not an exciting new fashion but an antisocial and deadly disease. Here a great responsibility rests on the press, radio, and television to present the facts in their true light. A drug pusher is akin to a poisoner; a drug addict is a person seriously ill with a contagious disease. Finally the medical profession surely has lessons to learn. Those few of its members who have already created a serious problem by overprescribing heroin or cocaine stand condemned. But are amphetamines, barbiturates, and other drugs that lead to dependence always prescribed with the scrupulous care it is apparent should be devoted to their therapeutic use?

## Oral Contraceptives and Thrombo-embolism

On 4 April, as we went to press, the Minister of Health, in reply to a question by Mr. Kenneth Lomas, M.P. for Huddersfield (West), made the following statement about an association between oral contraceptives and thrombo-embolism.

"A series of investigations has been undertaken by the Committee on Safety of Drugs, the College of General Practitioners, and the Medical Research Council in order to examine the possibility that the use of oral contraceptives might be associated with an increased risk of thrombo-embolic conditions.

"The Medical Research Council has recently reported to me that the results of these studies suggest that a woman taking such contraceptives incurs a slightly increased risk of developing thrombo-embolic disorders but that the risk is small and less than that which arises from the ordinary pregnancy and delivery which these contraceptives are intended to prevent. It must, moreover, be realized that all women of child-bearing age are at risk of developing these conditions whether or not they are taking oral contraceptives—as are men of the same age group.

"The Council inform me that the risk of thrombo-embolic conditions arising from the taking of oral contraceptives cannot be precisely quantified at the present time but further data are being collected with this object in mind. The report of the preliminary studies will be published as soon as possible.

"The Committee on Safety of Drugs, who considered this information, have advised me that since oral contraceptives possess considerable therapeutic as well as social value they do not feel justified in recommending their withdrawal from the market on the grounds of thrombo-embolic risk, as long as they are available only on medical prescription, and doctors are aware of the slight risk involved. The Committee point out that pharmacological activity and toxicity are inseparable and that on present evidence the risk is specifically less than the risk of thrombo-embolic episodes associated with pregnancy and childbirth.

"The Committee have been greatly assisted by doctors who, in response to their appeal, have reported thrombo-embolic conditions in women of child-bearing age and they rely upon continued reporting by all doctors for the further elucidation of this problem."

Some association between oral contraceptives and thrombo-embolic disorders has been suspected for a long time. But so far there has been no more than circumstantial evidence to support the impression. The paper by E. R. Bickerstaff

and J. MacDonald Holmes in the *B.M.J.* for 25 March, reporting episodes of acute cerebral arterial insufficiency in women on the pill, emphasized the difficulties the clinician faces in deciding whether the apparent association is more than a random one. Now the Medical Research Council, on the basis of a series of investigations—as yet unpublished—has advised the Minister that there seems to be a slightly increased risk of thrombo-embolism for the woman on oral contraceptives, but that this is small.

Doctors who have the task of advising women taking oral contraceptives, or contemplating doing so, have now been placed in a position of some difficulty. They will remain so until the detailed results of these investigations are published.

## Electronic Devices for Incontinence

Incontinence in women is a common complaint and is subjected to a variety of treatments. They include physiotherapy, muscle exercises, and faradic stimulation. If these fail various operations, such as the Aldridge sling or the Marshall-Marchetti-Krantz operation, are performed. If prolapse is present it too is corrected. Though these operations carry a high percentage of cures, the causes of the incontinence are ill understood.

Recently, after experimental studies,<sup>1</sup> attempts have been made to treat incontinence by electronic stimulation of the pelvic floor or the bladder neck by means of implanted electrodes activated by a radio transmitter outside the body. The electrodes have sometimes been placed near the bladder neck on the assumption that there was an internal sphincter present, but at other times they have been placed on the anterior fibres of the levator, or in cases of double incontinence—for example, meningomyeloceles—in the perineum. Despite the difficulties inherent in using an implanted device, many of them seem to have been overcome. The results of the treatment have been encouraging, particularly as in most cases the ordinary methods of treatment have failed. On stimulation the urethral pressure is found to rise in some cases but not in all. Cystograms taken with stimulation and without show a change in the cysto-urethral angle, and this seems to confirm T. N. A. Jeffcoate's hypothesis that the angle plays a part in causing incontinence.<sup>2</sup> That the result is not simply the effect of yet another retropubic procedure is proved by the return of incontinence if the apparatus is broken or misused, though in some cases after treatment lasting several months the cure seems permanent. At present the major difficulty and cause of failure appears to be fracture of the wire lead or electrode, but with modern equipment failures have become rare.

Mentally disturbed patients may fail to use the apparatus properly, so patients must be carefully selected with this in mind. As the external unit and coil must be apposed accurately in all positions—standing, sitting, lying, or moving—patients are encouraged to devise their own belts to hold them comfortably. The conditions treated have varied from multiple sclerosis and other severe diseases to the common stress incontinence. Though much more work needs to be done in this field, the treatment holds out hope for some patients.

<sup>1</sup> Alexander, S., and Rowan, D., *Brit. J. Surg.*, 1966, 53, 1053.

<sup>2</sup> Jeffcoate, T. N. A., *J. roy. Coll. Surg. Edinb.*, 1961, 7, 28.