WORLD HEALTH ORGANIZATION
TECHNICAL REPORT SERIES
No. 211

EXPERT COMMITTEE ON ADDICTION-PRODUCING DRUGS

Eleventh Report

WORLD HEALTH ORGANIZATION
PALAIS DES NATIONS
GENEVA
1961

EXPERT COMMITTEE ON ADDICTION-PRODUCING DRUGS

Geneva, 10-15 October 1960

Members :

Dr N. B. Eddy, Consultant on Narcotics, National Institutes of Health, Bethesda, Md., USA

Dr L. Goldberg, Professor of Research on Alcohol and Analgesics, Karolinska Institutet, Stockholm, Sweden (*Chairman*)

Dr G. Joachimoglu, Professor Emeritus of Pharmacology ; formerly Chairman, Superior Health Council, Ministry of Social Welfare, Athens, Greece

Dr J. La Barre, Professor of Pharmacology, Faculty of Medicine and Pharmacy, Université libre de Bruxelles, Brussels, Belgium

Dr T. Masaki, Professor Emeritus, Department of Pharmacology, Hokkaido University School of Medicine, Sapporo, Japan (*Vice-Chairman*)

Dr B. Mukerji, Director, Central Drug Research Institute, Chattar Manzil Palace, Lucknow, India

Mr J. R. Nicholls, C.B.E., D.Sc., formerly Deputy Government Chemist, London, England (*Rapporteur*)

Dr V. V. Vassilieva, Professor of Pharmacology, Second Moscow Institute of Medicine, Moscow, USSR

Representatives of the United Nations :

Mr G. Yates, Director, Division of Narcotic Drugs, United Nations, Geneva

Mr A. Lande Dr jur., Chief of Section, Division of Narcotic Drugs, United Nations, Geneva

Mr H. Jhabvala, Division of Narcotic Drugs, United Nations, Geneva

Representative of the Permanent Central Opium Board and the Drug Supervisory Body :

Mr L. Atzenwiler, Secretary of these two bodies, Geneva

Secretariat :

Dr H. Halbach, Chief Medical Officer, Addiction-Producing Drugs, WHO (*Secretary*)

PRINTED IN SWITZERLAND

EXPERT COMMITTEE ON ADDICTION-PRODUCING DRUGS

Eleventh Report

The Expert Committee on Addiction-Producing Drugs met in Geneva from 10-15 October 1960.

The Deputy Director-General on behalf of the Director-General opened the session and welcomed the members of the Committee, the representatives of the Secretary-General of the United Nations, and the representative of the Permanent Central Opium Board and the Drug Supervisory Body. Dr L. Goldberg was elected as Chairman, Dr T. Masaki as Vice-Chairman, and Mr J. R. Nicholls as Rapporteur.

1. Notifications

1.1 *Benzodioxane derivatives*
*7-(*p*-methoxybenzoyl)-2-morpholinomethyl-1,4-benzodioxane*
7-benzoyl-2-piperidinomethyl-1,4-benzodioxane

In its ninth report[1] the Committee considered "that there was no adequate evidence of any addiction liability of these drugs and that an opinion must wait until such evidence is available". The two specified derivatives have since been evaluated for physical dependence in monkeys with negative results. In view of this evidence, the general pharmacological action of these substances, and the absence of any indication of their convertibility into addiction-producing drugs the Committee was of the opinion that these two benzodioxane derivatives should not now be regarded as addiction-producing drugs. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to these benzodioxane derivatives be communicated to the Secretary-General of the United Nations.

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[1] *Wld Hlth Org. techn. Rep. Ser.*, 1959, **160**, 8 (section 3.2.1).

1.2 *Clonitazene* [1]

Referring to the notification of the Government of the United States of America the Committee was of the opinion that clonitazene, because it (1) produces morphine-like effects, (2) will suppress abstinence phenomena of a known morphine addiction, and (3) will sustain a morphine addiction, must be considered to be an addiction-producing drug comparable to morphine and that clonitazene and its salts should fall under the regime laid down in the 1931 Convention for the drugs specified in Article 1, paragraph 2, Group I. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to clonitazene and its salts be communicated to the Secretary-General of the United Nations.

1.3 *1-Cyclohexyl-2,2-di-diethylaminomethyl-1-phenylethane*

Referring to the notification from the Government of France,[2] the Committee appreciated that the submission had been made because of certain similarities in chemical structure between this drug and drugs known to be addiction-producing. However, the Committee considered that there was no evidence of addiction liability for 1-cyclohexyl-2,2-di-diethylaminomethyl-1-phenylethane and that there was no indication of its convertibility into an addiction-producing drug. Consequently, the Committee was of the opinion that 1-cyclohexyl-2,2-di-diethylaminomethyl-1-phenylethane should not be regarded as an addiction-producing drug. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to 1-cyclohexyl-2,2-di-diethylaminomethyl-1-phenylethane should be communicated to the Secretary-General of the United Nations.

1.4 *Dextro-phenomorphan* [3]

Referring to the request from the Government of Switzerland [4] for the exemption of dextro-phenomorphan from international control, the Committee considered that dextro-phenomorphan appeared to be free from

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[1] International non-proprietary name proposed for 2-(*p*-chlorbenzyl)-1-diethylaminoethyl-5-nitrobenzimidazole

[2] *Wld Hlth Org. techn. Rep. Ser.*, 1960, **188**, 4 (section 1.3)

[3] Phenomorphan is the international non-proprietary name proposed for (±)-3-hydroxy-N-phenethylmorphinan.

[4] *Wld Hlth Org. techn. Rep. Ser.*, 1957, **116**, 6 (section 5.1)

addiction liability, but that there was insufficient evidence of the impracticability of its conversion into a drug having addiction liability. The Committee was of the opinion that exemption should not be granted in favour of dextro-phenomorphan ((+)-3-hydroxy-N-phenethylmorphinan). Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to dextro-phenomorphan be communicated to the Secretary-General of the United Nations.

1.5 *Diampromide* [1]

Referring to the notification of the Government of the United States of America, the Committee was of the opinion that diampromide, because it (1) produces morphine-like effects, (2) will suppress abstinence phenomena of a known morphine addiction, and (3) will sustain a morphine addiction, must be considered to be an addiction-producing drug comparable to morphine and that diampromide and its salts should fall under the regime laid down in the 1931 Convention for the drugs specified in Article 1, paragraph 2, Group I. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to diampromide and its salts be communicated to the Secretary-General of the United Nations.

1.6 *Diphenoxylate* [2]

Referring to the notifications from the Governments of Belgium, the Netherlands and the United States of America, the Committee was of the opinion that diphenoxylate, because it (1) produces morphine-like effects, (2) will suppress abstinence phenomena of a known morphine addiction, and (3) will sustain a morphine addiction, must be considered an addiction-producing substance comparable to morphine and that diphenoxylate and its salts should fall under the regime laid down in the 1931 Convention for the drugs specified in Article 1, paragraph 2, Group I. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to diphenoxylate and its salts be communicated to the Secretary-General of the United Nations.

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[1] International non-proprietary name proposed for N-[2-(methylphenethylamino) propyl]-propionanilide

[2] International non-proprietary name proposed for 1-(3-cyano-3,3-diphenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester

1.7 *Diphenoxylate preparations*

The Committee considered requests from the Governments of Belgium and France for the exemption of two preparations containing diphenoxylate from the provisions of international control. The preparations had the following compositions:

(1)	diphenoxylate (hydrochloride)	2.5	milligrams
	atropine sulphate	0.025	"
	lactose	85	"
	sugar	7	"
	starch	21.6	"
	talc	3	"
	magnesium stearate	1	"
	tartrazine (FD&C yellow No. 5)	0.7	"
(2)	diphenoxylate (hydrochloride)	2.5	milligrams
	atropine sulphate	0.025	"
	presented in the form of a tablet with a final weight of 0.8 grams		

The Committee concluded that there was no evidence that preparations of the composition stated could give rise to addiction or that they would endanger public health by permitting recovery of diphenoxylate.

For these reasons the Committee was of the opinion that the two preparations should be exempted from the control provisions specified in the 1925 Convention. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to these preparations of diphenoxylate be communicated to the Secretary-General of the United Nations.

1.8 *Ethoheptazine*

In its sixth report[1] the Committee proposed that a very close watch be kept on further experimentation and any clinical use of certain hexamethyleneimine derivatives. Since that time clinical experience and a controlled clinical experiment with ethoheptazine have been completely negative with respect to any evidence of abuse or addiction liability. The Committee considered that this evidence indicates that ethoheptazine has no addiction liability. Furthermore, there is no indication that ethoheptazine is convertible to an addiction-producing drug. Consequently, the Committee was of the opinion that ethoheptazine should not be regarded as an addiction-producing drug. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to ethoheptazine be communicated to the Secretary-General of the United Nations.

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[1] *Wld Hlth Org. techn. Rep. Ser.*, 1956, **102**, 11 (section 5.5.2)

1.9 *Etonitazene* [1]

Referring to the notification of the Government of the United States of America, the Committee was of the opinion that etonitazene, because it (1) produces morphine-like effects, (2) will suppress abstinence phenomena of a known morphine addiction, and (3) will sustain a morphine addiction, must be considered to be an addiction-producing drug comparable to morphine and that etonitazene and its salts should fall under the regime laid down in the 1931 Convention for the drugs specified in Article 1, paragraph 2, Group I. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to etonitazene and its salts be communicated to the Secretary-General of the United Nations.

1.10 *Hydromorphinol* [2]

Referring to the notification from the Government of the United Kingdom of Great Britain and Northern Ireland, the Committee considered that hydromorphinol (1) produces morphine-like effects, and (2) will suppress abstinence phenomena of a known morphine addiction. Evidence on these points was derived from experiments in monkeys. Experience has shown that results obtained in the monkey correlate with those in man, so that, when the former are unequivocal, they may be accepted as evidence for what is to be expected in man. In addition, the chemical structure and pharmacological properties of hydromorphinol bear an extremely close relationship to those of morphine. Consequently the Committee was of the opinion that hydromorphinol must be considered to be an addiction-producing drug comparable to morphine and that hydromorphinol and its salts should fall under the regime laid down in the 1931 Convention for the drugs specified in Article 1, paragraph 2, Group I, sub-group (a). Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to hydromorphinol and its salts be communicated to the Secretary-General of the United Nations.

1.11 *Phenampromide* [3]

Referring to the notification of the Government of the United States of America, the Committee was of the opinion that phenampromide because it (1) produces morphine-like effects, (2) will suppress abstinence

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[1] International non-proprietary name proposed for 2-(*p*-ethoxybenzyl)-1-diethylaminoethyl-5-nitrobenzimidazole

[2] International non-proprietary name proposed for 14-hydroxydihydromorphine

[3] International non-proprietary name proposed for N-[2-(1-methylpiperid-2-yl)ethyl]-propionanilide

phenomena of a known morphine addiction, and (3) will sustain a morphine addiction, must be considered to be an addiction-producing drug comparable to morphine and that phenampromide and its salts should fall under the regime laid down in the 1931 Convention for the drugs specified in Article 1, paragraph 2, Group I. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to phenampromide and its salts be communicated to the Secretary-General of the United Nations.

1.12 *Phenoperidine* [1]

Referring to the notification from the Government of Belgium, the Committee considered that phenoperidine (1) produces morphine-like effects, and (2) will suppress abstinence phenomena of a known morphine addiction. Evidence on these points was derived from experiments in monkeys. Experience has shown that results obtained in the monkey correlate with those in man, so that, when the former are unequivocal, they may be accepted as evidence for what is to be expected in man. In addition, the chemical structure of phenoperidine bears an extremely close relationship to those of other drugs known to be addiction producing. Consequently the Committee was of the opinion that phenoperidine must be considered to be an addiction-producing drug comparable to morphine and that phenoperidine and its salts should fall under the regime laid down in the 1931 Convention for the drugs specified in Article 1, paragraph 2, Group I. Therefore,

The Expert Committee on Addiction-Producing Drugs

RECOMMENDS that its opinion with respect to phenoperidine and its salts be communicated to the Secretary-General of the United Nations.

2. Work of International Bodies Concerned with Narcotic Drugs

2.1 The Secretary summarized the report of the fifteenth session of the Commission on Narcotic Drugs of the Economic and Social Council ; [2] the relevant resolutions of the Economic and Social Council ; [3] and the

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[1] International non-proprietary name proposed for 1-(3-hydroxy-3-phenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester

[2] United Nations, Commission on Narcotic Drugs (1960) *Report of the fifteenth session (25 April - 13 May 1950) - (Economic and Social Council. Official Records : thirtieth session. Supplement No. 9)*, Geneva (Document E/3385)

[3] United Nations, Economic and Social Council (1960) *Official Records : thirtieth session, 5 July - 5 August 1960. Supplement No. 1 : Resolutions*, Geneva, p. 8 (Document E/3422)

latest reports of the Permanent Central Opium Board [1] and the Drug Supervisory Body. [2]

2.2 Among the items of interest, some of which will be referred to later in this report, note was taken of the use and abuse of (-)-1-dimethylamino-1,2-diphenylethane (SPA) in Japan, particularly its use by narcotic addicts. The compound appears to have a mixed pharmacological action, in some respects resembling both amphetamine and morphine. Tests are under way to determine the possibility of physical dependence properties in (-)-1-dimethylamino-1,2-diphenylethane. Meanwhile the situation appears to be a local one, but it illustrates a danger inherent in the control of narcotic addicts since such individuals have a tendency to abuse any new psychically active drug when the availability of narcotics is restricted. The Committee would again draw the attention of governments to the necessity to watch very closely the development of new psychically active compounds in order to restrict the possibility of abuse such as that which has occurred in the case of (-)-1-dimethylamino-1,2-diphenylethane.

In this connexion, the Committee's attention was drawn to reports on cases of abuse of amphetamines and amphetamine-like substances contained in many weight-reducing medicines. The Committee would emphasize the need for appropriate control measures (similar to those recommended previously by international bodies for amphetamines [3, 4] and barbiturates) [5, 6] to prevent the misuse of such medicines and to warn against the possibility of psychic dependence during their therapeutic administration.

2.3 In connexion with the dangers that may arise from the free distribution of medical samples, the Committee continues to be concerned by the inadequacy in many instances of information and warning on the possibilities of addiction liability of new drugs, particularly where analgesic and antitussive properties are claimed. The Committee emphasizes the need for improvement in this situation.

In some areas evidence on addiction liability is regarded as part of the evidence for the safety for use of new drugs intended for pain relief.

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[1] United Nations, Permanent Central Opium Board (1959) *Report to the Economic and Social Council on the Work of the Board in 1959*, Geneva (Document E/OB/15)

[2] United Nations, Drug Supervisory Body (1959) *Estimated world requirements of narcotic drugs in 1960*, Geneva (Document E/DSB/17)

[3] *Wld Hlth Org. techn. Rep. Ser.*, 1954, **76**, 11 (section 8); 1956, **102**, 12 (section 7)

[4] United Nations, Commission on Narcotic Drugs (1956) *Report of the eleventh session (23 April - 18 May 1956) - (Economic and Social Council. Official Records: twenty-second session. Supplement No. 8)*, Geneva, p. 37 (Document E/2891)

[5] *Wld Hlth Org. techn. Rep. Ser.*, 1957, **116**, 10 (section 9)

[6] United Nations, Commission on Narcotic Drugs (1957) *Report of the twelfth session (29 April - 31 May 1957) - (Economic and Social Council. Official Records: twenty-fourth session. Supplement No. 10)*, Geneva, p. 39 (Document E/3010/Rev. 1)

Extension of this principle to consideration of abuse liability in connexion with the introduction of psychically active drugs would also seem to be desirable.

2.4 With reference to the invitation from the Economic and Social Council [1] asking the World Health Organization to consider the possibility of preparing a code of present practices by which addiction-producing properties of drugs are established, the Committee wished to emphasize its objective when it deals with a notification with respect to a new drug. The international narcotics conventions specify certain characteristics to be ascertained for purposes of control, the over-all purposes of which are the furtherance of public safety and prevention of abuse of drugs so far as addiction liability is concerned.

Whereas not so long ago prolonged clinical experience was the only source of information on addiction liability and the risk therein to public health, there are now available tests in animals and in man [2] which give information on these points. Each of these tests, however, has limitations which affect its interpretation and applicability.

The extent of testing required will vary with the substance in question. Addictive qualities of a drug meeting the specifications of the international conventions may become apparent at a very early stage. On the other hand, negative results carry little conviction. The degree of testing in a specific case is that which establishes beyond reasonable doubt that a substance does or does not exhibit addiction liability or risk of abuse which would warrant control as provided for in the international conventions. For these reasons a more precise code of practice cannot be outlined at present.

The Committee wished to draw attention to the suggestions in its tenth report [3] for extension of research in the field of drug addiction. These included development and calibration of methods for assessing addiction liability. In addition it would be desirable to prepare a review of the methods designed to evaluate addiction and abuse liability, which should include a discussion of the applicability and limitations of these methods.

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[1] United Nations, Economic and Social Council (1960) *Official Records : thirtieth session, 5 July - 5 August 1960. Supplement No. 1 : Resolutions*, Geneva, p. 9, Resolution 770(XXX)D (Document E/3499)

[2] e.g., suppression of abstinence in morphine-addicted monkeys or dogs; direct addiction experiments in various animal species; evaluation of opiate-like properties in man; suppression of abstinence phenomena in addicted individuals; substitution for the drug of addiction in addicts; direct addiction observations in man: precipitation of abstinence phenomena by a morphine antagonist in an addicted individual (animal or man)

[3] *Wld Hlth Org. techn. Rep. Ser.*, 1960, **188**, 10 (section 4)

3. Antibiotic Substances from Cannabis

The Committee considered the information available regarding substances with antibacterial activity which can be extracted from *Cannabis sativa*. The Committee concluded that at present the case has not been proved in favour of making cannabis available for the extraction of useful drugs, particularly of the antibiotic type.

As regards the question of the therapeutic usefulness of cannabis, the opinion expressed in the third report of the WHO Expert Committee on Addiction-Producing Drugs [1] remains unchanged. Cannabis and its preparations are practically obsolete and there is no justification for their medical use.

This conclusion does not affect the Committee's opinion as expressed in its tenth report.[2] The prohibition or restriction of the medical use of a drug representing a particularly high danger to the community should continue to be recommended by the international organs concerned, but should not be mandatory.

4. Medical Control of Addicts

The Committee considered in some detail attitudes towards drug addicts and their treatment. Its attention was drawn to a proposal for civil commitment of an addict (as in the case of mental patients in general) to the authority of a medical panel, which would provide supervision and direction for his treatment from the time of the initial diagnosis to his rehabilitation.

The Committee approved the principle of civil commitment, considering that its general application would be a distinct step forward in the handling of the problem. The Committee wished to add that civil commitment is intended to ensure adequate and complete treatment; it does not replace penalties for law violations nor excuse such violations.

The Committee pointed out that such a procedure would be in line with and be greatly facilitated by the lines of research suggested in its tenth report. The commitment procedure would also entail the collection of information on and the development of diagnostic procedures including, *inter alia*, identification of addicting drugs in body fluids.

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[1] *Wld Hlth Org. techn. Rep. Ser.*, 1952, **57**, 11 (section 7)

[2] *Wld Hlth Org. techn. Rep. Ser.*, 1960, **188**, 14 (section 6.4)

5. Proposed Single Convention on Narcotic Drugs

Bearing in mind the provisions now outlined in the third draft of the Single Convention [1] applicable to preparations to be included in Schedule III annexed to that draft, the Committee considered that the criteria for inclusion of preparations of Schedule II drugs should be as follows: (*a*) a specified quantity or concentration of the drug; (*b*) the presence therewith of at least one other therapeutically active ingredient which does not fall under the provisions of international control.

For the substances at present listed in Schedule II (i.e., acetyldihydrocodeine, codeine, dihydrocodeine, ethylmorphine, pholcodine) the quantity should not be more than 0.1 gram per unit in dry preparations (pills, tablets, etc.) and the concentration should not be more than 2.5% or 0.1 gram per dose in liquid preparations.

Further the Committee believed that with regard to preparations of substances which may be added to Schedule II or of any substance for which exemption is contemplated the procedure outlined in the operative part of resolution 4(XV) of the Commission on Narcotic Drugs [2] is practicable.

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[1] United Nations, Commission on Narcotic Drugs. *The Single Convention on Narcotic Drugs (third draft)* (Mimeographed document E/CN.7/AC.3/9)

[2] United Nations Commission on Narcotic Drugs (1960) *Report of the fifteenth session (25 April - 13 May 1950) - (Economic and Social Council. Official Records: thirtieth session. Supplement No. 9)*, Geneva, p. 23 (Document E/3385)

Annex

LIST OF DRUGS UNDER INTERNATIONAL NARCOTICS CONTROL [1]

Common name or INN *	*Chemical designation*	*Report of Expert Committee on Addiction-Producing Drugs* [2]	*Control regime*	
			Group	*Convention*
acetyldihydrocodeine	acetyldihydrocodeine	1949, **19**, 30	II	1931
acetylmethadol *	6-dimethylamino-4,4-diphenyl-3-acetoxyheptane	1949, **19**, 31	I	1931
allylprodine *	3-allyl-1-methyl-4-phenyl-4-propionoxypiperidine	1960, **188**, 3	I	1931
alphacetylmethadol *	α-6-dimethylamino-4,4-diphenyl-3-acetoxyheptane	1953, **76**, 7	I	1931
alphameprodine *	α-1-methyl-3-ethyl-4-phenyl-4-propionoxypiperidine	1957, **116**, 8	I	1931
alphamethadol *	α-6-dimethylamino-4,4-diphenyl-3-heptanol	1954, **76**, 7	I	1931
alphaprodine *	α-1,3-dimethyl-4-phenyl-4-propionoxypiperidine	1949, **19**, 30	I	1931
anileridine *	1-[2-(p-aminophenyl)-ethyl]-4-phenylpiperidine-4-carboxylic acid ethyl ester	1957, **116**, 7	I	1931
benzethidine *	1-(2-benzyloxyethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester	1960, **188**, 4	I	1931
benzylmorphine	benzyl ether of morphine		I	1931
betacetylmethadol *	β-6-dimethylamino-4,4-diphenyl-3-acetoxyheptane	1954, **76**, 7	I	1931
betameprodine *	β-1-methyl-3-ethyl-4-phenyl-4-propionoxypiperidine	1952, **57**, 7	I	1931
betamethadol *	β-6-dimethylamino-4,4-diphenyl-3-heptanol	1955, **95**, 8	I	1931
betaprodine *	β-1,3-dimethyl-4-phenyl-4-propionoxypiperidine	1949, **19**, 30	I	1931
cannabis	*Cannabis sativa* L.		I	1925
clonitazene *	2-(p-chlorbenzyl)-1-diethylaminoethyl-5-nitrobenzimidazole	1961, **211**, 4	I	1931
cocaine	methyl ester of benzoylecgonine		I	1931
coca leaf				1925
codeine	3-methylmorphine		II	1931
desomorphine *	dihydrodesoxymorphine	1956, **102**, 6	I	1931
dextromoramide *	(+)-3-methyl-4-morpholino-2,2-diphenylbutyrylpyrrolidine	1958, **142**, 8	I	1931
diacetylmorphine	diacetylmorphine		I	1931

[1] For details such as synonyms and the date of coming into force of international control, see *Multilingual list of narcotic drugs under international control* (UN document E/CN.7/341) and *List of drugs under international control* (published annually by the UN, Division of Narcotic Drugs) respectively.

[2] The references given in this column are to *World Health Organization: Technical Report Series*, with the exception of the report published in 1949 which appeared in *Official Records of the World Health Organization*, No. 19.

Common name or INN *	*Chemical designation*	*Report of Expert Committee on Addiction-Producing Drugs* [1]	*Control regime*	
			Group	*Convention*
diampromide *	N-[2-(methylphenethylamino) propyl]-propionanilide	1961, **211**, 5	I	1931
diethylthiambutene *	3-diethylamino-1,1-di-(2'-thienyl)-1-butene	1956, **102**, 10	I	1931
dihydrocodeine	7,8-dihydrocodeine	1949, **19**, 30	II	1931
dihydromorphine	7,8-dihydromorphine		I	1931
dihydromorphine esters			I	1931
dimenoxadol *	dimethylaminoethyl 1-ethoxy-1,1-diphenylacetate	1959, **160**, 9	I	1931
dimepheptanol *	6-dimethylamino-4,4-diphenyl-3-heptanol	1949, **19**, 31	I	1931
dimethylthiambutene *	3-dimethylamino-1,1-di-(2'-thienyl)-1-butene	1954, **76**, 9	I	1931
dioxaphetyl butyrate *	ethyl-4-morpholino-2,2-diphenylbutyrate	1956, **102**, 9	I	1931
diphenoxylate *	1-(3-cyano-3,3-diphenyl-propyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester	1961, **211**, 5	I	1931
dipipanone *	4,4-diphenyl-6-piperidino-3-heptanone	1955, **95**, 8	I	1931
ecgonine	(-)-3-hydroxytropane-2-carboxylate		I	1931
ecgonine esters			I	1931
ethylmethylthiambutene *	3-ethylmethylamino-1,1-di-(2'-thienyl)-1-butene	1954, **76**, 9	I	1931
ethylmorphine	3-ethylmorphine		II	1931
etonitazene *	2-(p-ethoxybenzyl)-1-diethyl-aminoethyl-5-nitrobenzimid-azole	1961, **211**, 7	I	1931
etoxeridine *	1-[2-(2-hydroxyethoxy)-ethyl]-4-phenylpiperidine-4-carboxylic acid ethyl ester	1958, **142**, 9	I	1931
furethidine *	1-(2-tetrahydrofurfuryl-oxyethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester	1960, **188**, 5	I	1931
hydrocodone *	dihydrocodeinone		I	1931
hydrocodone esters			I	1931
hydromorphinol *	14-hydroxydihydromorphine	1961, **211**, 7	I	1931
hydromorphone *	dihydromorphinone			1925
hydromorphone esters				1925
hydroxypethidine *	1-methyl-4-(3-hydroxyphenyl)-piperidine-4-carboxylic acid ethyl ester	1949, **19**, 30	I	1931
isomethadone *	6-dimethylamino-5-methyl-4,4-diphenyl-3-hexanone	1949, **19**, 31	I	1931
ketobemidone *	1-methyl-4-(3-hydroxyphenyl)-4-piperidyl ethyl ketone	1952, **57**, 8	I	1931
levomethorphan *	(-)-3-methoxy-N-methyl-morphinan	1952, **57**, 6	I	1931

[1] The references given in this column are to *World Health Organization : Technical Report Series*, with the exception of the report published in 1949 which appeared in *Official Records of the World Health Organization*, No. 19.

Common name or INN *	*Chemical designation*	*Report of Expert Committee on Addiction-Producing Drugs* [1]	*Control regime*	
			Group	*Convention*
levomoramide *	(-)-3-methyl-4-morpholino-2,2-diphenylbutyrylpyrrolidine	1958, **142**, 8	I	1931
levophenacylmorphan *	(-)-3-hydroxy-N-phenacylmorphinan	1960, **188**, 5	I	1931
levorphanol *	(-)-3-hydroxy-N-methylmorphinan	1949, **19**, 31	I	1931
methadone *	6-dimethylamino-4,4 diphenyl-3-heptanone	1949, **19**, 30	I I	1931 1931
methyldesorphine *	6-methyl-Δ^6-desoxymorphine	1952, **76**, 6	I	1931
methyldihydromorphine *	6-methyldihydromorphine	1950, **21**, 5	I	1931
metazocine *	1,2,3,4,5,6-hexahydro-8-hydroxy-3,6,11-trimethyl-2,6-methano-3-benzazocine	1960, **188**, 6	I	1931
metopon *	7-methyldihydromorphinone	1949, **19**, 30	I	1931
morpheridine *	1-(2-morpholinoethyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester	1958, **142**, 8	I	1931
morphine			I	1931
morphine esters			I	1931
morphine ethers			I	1931
morphine-N-oxide			I	1931
morphine-N-oxide derivatives			I	1931
morphine pentavalent nitrogen derivatives			I	1931
myrophine *	myristylester of benzylmorphine	1955, **95**, 6	I	1931
norcodeine *	N-demethylated codeine	1959, **160**, 5	II [2]	1931
norlevorphanol *	(-)-3-hydroxymorphinan	1960, **188**, 6	I	1931
normethadone *	6-dimethylamino-4,4-diphenyl-3-hexanone	1955, **95**, 7	I	1931
normorphine *	N-demethylated morphine	1959, **160**, 5	I	1931
opium				1925
oxycodone *	dihydrohydroxycodeinone		I	1931
oxycodone esters			I	1931
oxymorphone *	dihydrohydroxymorphinone	1955, **95**, 6	I	1931
pethidine *	1-methyl-4-phenylpiperidine-4-carboxylic acid ethyl ester	1949, **19**, 30	I	1931
pethidine esters		1955, **95**, 9	I	1931
phenadoxone *	6-morpholino-4,4-diphenyl-3-heptanone	1949, **19**, 31	I	1931
phenampromide *	N-[2-(1-methylpiperid-2-yl) ethyl]-propionanilide	1961, **211**, 7	I	1931
phenazocine *	1,2,3,4,5,6-hexahydro-8-hydroxy-6,11-dimethyl-3-phenethyl-2,6-methano-3-benzazocine	1960, **188**, 6	I	1931

[1] The references given in this column are to *World Health Organization: Technical Report Series*, with the exception of the report published in 1949 which appeared in *Official Records of the World Health Organization*, No. 19.

[2] Recommended by WHO for this control regime.

Common name or INN *	*Chemical designation*	*Report of Expert Committee on Addiction-Producing Drugs* [1]	*Control regime*	
			Group	*Convention*
phenomorphan *	3-hydroxy-N-phenethylmorphinan	1956, **102**, 8	I	1931
phenoperidine *	1-(3-hydroxy-3-phenylpropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester	1961, **211**, 8	I	1931
pholcodine *	morpholinylethylmorphine	1950, **21**, 4	II	1931
piminodine *	1-(3-phenylaminopropyl)-4-phenylpiperidine-4-carboxylic acid ethyl ester	1960, **188**, 7	I	1913
proheptazine *	1,3-dimethyl-4-phenyl-4-propionoxyhexamthyleneimine	1956, **102**, 11	I	1931
properidine *	1-methyl-4-phenylpiperidine-4-carboxylic acid isopropyl ester	1955, **96**, 9	I	1931
propoxyphene *	4-dimethylamino-3-methyl-1,2-diphenyl-2-propionoxybutane	1958, **142**, 7	II [2]	1931
racemethorphan *	(±)-3-methoxy-N-methylmorphinan	1952, **57**, 6	I	1931
racemoramide *	(±)-3-methyl-4-morpholino-2,2-diphenylbutyrylpyrrolidine	1958, **142**, 8	I	1931
racemorphan *	(±)-3-hydroxy-N-methylmorphinan	1952, **57**, 6	I	1931
thebacon *	acetyldihydrocodeinone		I	1931
thebacon esters			I	1931
thebaine	3,6-dimethyl-8-dehydromorphine		I	1931
trimeperidine *	1,2,5-trimethyl-4-phenyl-4-propionoxypiperidine	1958, **142**, 9	I	1931

[1] The references given in this column are to *World Health Organization : Technical Report Series*, with the exception of the report published in 1949 which appeared in *Official Records of the World Health Organization*, No. 19.

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