

**USEFUL DRUGS, PREPARED UNDER
THE DIRECTION AND SUPERVISION
OF THE COUNCIL ON PHARMACY
AND CHEMISTRY OF THE AMERICAN
MEDICAL ASSOCIATION**

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USEFUL DRUGS

PREPARED UNDER THE DIRECTION AND SUPERVISION
OF THE COUNCIL ON PHARMACY AND CHEMISTRY
OF THE AMERICAN MEDICAL ASSOCIATION

A List of Drugs Selected to Supply the Demand for a Less Extensive Materia Medica and Especially to Serve as a Basis for the Teaching of Materia Medica and Therapeutics, and for Examinations on These Subjects by State Licensing Boards, with a Discussion of their Actions, Uses and Dosage.

Third Edition

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PREFACE TO SECOND EDITION

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It has long been recognized that the multiplicity of drugs and preparations of drugs presented to the attention of the medical profession is an evil. Leaving out of account the articles described in the National Formulary and the vast number described in dispensatories and similar unofficial compilations, the number of drugs and preparations described in the Pharmacopeia alone is far too large for intelligent practical use. Of even greater importance is the well-known fact that a considerable proportion of Pharmacopeial drugs and preparations are superfluous or worthless. Repeated attempts to eliminate such articles from the Pharmacopeia have failed because they have uniformly encountered the objection that the articles or preparations are used by some physicians and therefore should be recognized and authoritatively defined.

In the preface to the last edition of his "Text-Book of Pharmacology and Therapeutics," Cushny announces that the space devoted to many of the less important and less reliable drugs has been much curtailed, that many have been omitted altogether from consideration, and that this is in accordance with the general trend of medical progress and further that therapeutics would probably not have suffered from an even more drastic selection. He further says:

"For as long as he [the medical student] has to learn the supposed virtues of a host of obscure substances, he will tend to use them in practice, even if only tentatively. This in turn necessitates their inclusion in the pharmacopeias, which again gives them some standing and perpetuates them as subjects of teaching and examination. If examiners would break this vicious circle, they would render the subject of pharmacology more attractive to him. There is no question that the insistence on numberless preparations of drugs of questionable value has discouraged interest in therapeutics."

Efforts were made by the Council on Medical Education of the American Medical Association and the Confederation of State Examining and Licensing Boards to restrict instruction and examination in materia medica to the more important drugs, and this suggested the desirability of selecting a fundamental list of drugs with which all medical students and practitioners might be expected to be familiar and to

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which, therefore, state examining and licensing boards might largely or entirely confine their examinations in materia medica. A list prepared by the Council on Medical Education and the National Confederation of State Medical Examining and Licensing Boards was taken as a basis by the Council on Pharmacy and Chemistry, and, after various revisions, more or less guided by numerous criticisms and suggestions from teachers of materia medica, deans of medical schools, secretaries and members of state medical examining and licensing boards, and other members of the medical profession, was published in a preliminary form under the title "Useful Remedies." After still further revision in the light of advice and information elicited through this preliminary publication, the first edition of the present volume was published under the title "A Handbook of Useful Drugs." This little work presented a brief but practical discussion, from the modern point of view, of the drugs which remained after the winnowing and sifting process above described. It was offered as a text on which teachers of materia medica and therapeutics might base their instruction and state examining boards their examinations. In the words of the preface to the first edition, it was "confidently predicted that an intelligent and critical use of these selected drugs will prove their general sufficiency and show that many drugs now discussed in textbooks are superfluous and that many newly discovered or widely exploited proprietary preparations have no advantage over those contained in this book." This prediction has been more and more justified since the original publication in 1913. A number of medical schools and state medical examining and licensing boards have taken "Useful Drugs" as a basis for their instruction and examinations in materia medica.

As the time of publication of the ninth revision of the U. S. Pharmacopeia and the fourth edition of the National Formulary coincided with the preparation of this edition of "Useful Drugs," the changes in the requirements of these two official books of standards have naturally been incorporated in this volume.

PREFACE TO THIRD EDITION

The only important changes from the 1916 edition consist in the addition of Theophylline and of Antimentingococcus Serum, which appeared to the Council of sufficient therapeutic importance to be counted among "Useful Drugs"; and the omission of Dilute Hydrocyanic Acid and of Diacetylmorphine (Heroin) Hydrochloride. The following reasons prompted the Council to order these deletions:

Dilute hydrocyanic acid was admitted to "Useful Drugs" because of its importance as a poison. This is no longer a sufficient justification for its inclusion, since it has become practically obsolete as a remedial agent. The Council therefore directed its omission from future editions of "Useful Drugs."

Heroin was included in "Useful Drugs" because of its extensive use in coughs, etc. This use originated largely because of claims, no longer accepted, that heroin was a safe drug, especially from the habit producing standpoint, as well as on account of other claimed advantages which further work has failed to confirm.

The Council holds that heroin has no advantage over morphine; that it shares every disadvantage of morphine; and that on the whole, its introduction has been harmful, in that it furnished a specious means on the one hand for avoiding the well founded popular fears of morphine by substituting another habit forming drug.

While heroin undoubtedly accomplishes whatever morphine accomplishes, and in *that* sense may be considered as a useful drug, it does not deserve a place in the selected list that is authorized by the Council.

ABBREVIATIONS

The following abbreviations occur in the text:

U. S. P.—The Pharmacopeia of the United States of America, Ninth Revision.

N. F.—The National Formulary, Fourth Edition.

N. N. R.—New and Nonofficial Remedies, 1916.

STATEMENT OF SOLUBILITY

For ease of reference the solubility of official articles is indicated in approximate terms in accordance with the following equivalents:

Substances that are soluble in less than

1 part of solvent = very soluble.

From 1 to 10 parts of solvent = freely soluble.

From 10 to 100 parts of solvent = soluble.

From 100 to 1,000 parts of solvent = slightly soluble.

From 1,000 to 10,000 parts of solvent = very slightly soluble.

From 10,000 to 100,000 parts of solvent = nearly insoluble.

More than 100,000 parts of solvent = practically insoluble.

The solubility values are for distilled water at approximately 25 C. and for the official U. S. P. alcohol at the same temperature.

USEFUL DRUGS

Acacia (Acac.), Acacia, U. S. P. (Gum Arabic).—A gummy exudation from *Acacia senegal* and other African species of acacia.

PROPERTIES: Acacia occurs in colorless or pale yellowish opaque, brittle, inodorous tears or fragments which are completely soluble in water (1:2), but practically insoluble in alcohol.

MUCILAGO ACACIAE (MUCIL. ACAC.), MUCILAGE OF ACACIA, U. S. P.—A 35 per cent. solution of acacia in distilled water.

ACTION AND USES: Acacia and its mucilage are used as demulcents and suspending agents in the making of emulsions and mixtures.

Acetanilidum (Acetanil.), Acetanilid, U. S. P. (Antifebrin).—The monoacetyl derivative, $C_6H_5NH(CH_3CO)$, of anilin.

PROPERTIES: Acetanilid is an odorless, crystalline powder, having a slightly burning taste. It is only slightly soluble in water (1:190), but freely soluble in alcohol (1:3.4).

INCOMPATIBILITIES: Acetanilid is incompatible with spirit of nitrous ether. It forms a semiliquid mass when triturated with chloral or antipyrin.

ACTION AND USES: Acetanilid is analgesic, antipyretic and, in excessive doses, a cardiac depressant. These effects are probably due to para-aminophenol, into which it is converted in the body.

Moderate doses have little effect on the temperature of normal animals and men, but such doses cause a marked reduction of the temperature in fever. Large doses, or small doses taken habitually, convert hemoglobin into methemoglobin and may destroy the red blood-corpuscles. In poisonous doses acetanilid produces cyanosis, abnormal reduction of temperature, coldness of the extremities and profuse sweating. In individuals with an idiosyncrasy toward the drug similar symptoms may be produced by small doses. It should be avoided or used cautiously in patients who are debilitated from any cause.

Acetanilid is effective for the relief of headache and neuralgic pain, but is not suited to the treatment of pain caused by inflammation.

DOSAGE: 0.20 Gm. or 3 grains. It is well to begin with 0.10 Gm. or about 2 grains and to repeat cautiously. Formerly mixtures of acetanilid with caffeine or ammonium salts were advised on the supposition that the cardiac depression would thus be avoided, but this does not seem to be the case. Investigation has shown that acetanilid is rendered somewhat more toxic by caffeine. The drug