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**Steven B Kayne, Complementary Therapies for Pharmacists**

London: Pharmaceutical Press, 2002. 425 pages  
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*Reviewed by A. Nathan, London, England*

Complementary, or alternative, medicine has grown enormously in popularity in recent years and in response to the demand, in the UK just about every pharmacy now stocks and sells alternative medicines. Pharmacists need to be well-informed about them to assist their customers choose remedies that are appropriate and safe. However, reliable sources of information have been sparse and such that are available have tended to be strongly biased, either because they are presented by devotees of particular systems or therapies or by companies marketing products that have an obvious commercial interest in promoting them. Until now there has been no single source of objective information written specifically for UK pharmacists.

Dr Steven Kayne is a pharmaceutical scientist and community pharmacist who has long taken an interest and is an acknowledged expert in alternative medicine, and with this book he presents for the first time for UK pharmacists a comprehensive and authoritative text on the subject. His book is as much an encyclopaedia of alternative therapies as a textbook, covering all aspects of every alternative therapy used or practised in the UK. It is set out in four parts, the first being a general introduction to the concepts of alternative medicine and its place within the western medicine system. Part Two covers the main complementary therapies for which pharmacists are likely to stock products, viz. homeopathy, herbalism, aromatherapy and flower remedies. Part Three deals with traditional Chinese and Indian Ayurvedic therapies, and Part Four with manipulative and other therapies that do not involve the use of medicinal products.

Each chapter in Parts Two, Three and Four follows the same structure, starting with a definition of the therapy, its history and underlying philosophy or theory, and a review of the evidence of effectiveness and safety. Description of the preparation of materia medica and use of remedies follows, or of the practice and application of therapies that do not involve medication. Each chapter ends with sources of information for those wanting to pursue a subject

further, and a list of references. The book is thoroughly researched with some 900 references cited.

To trained scientists like pharmacists, especially those with no previous knowledge of complementary medicine, the descriptions of the underlying principles of the systems covered may seem unconvincing and sometimes downright weird. In some cases the theories are developed out of observations, although often of doubtful validity. In others the theories and bases for treatments arise from the personal philosophies or even flashes of inspiration of their inventors, with no apparent scientific basis. Dr Kayne describes these in a detached and objective manner, and reviews such scientific evidence as exists of their effectiveness. He acknowledges that all complementary and alternative disciplines suffer from a lack of good quality, research based evidence supporting their use. But he does not judge them, and even where he has pointed out that objective proof of efficacy is flimsy or lacking he goes on to describe them and their application from the point of view of their practitioners and advocates.

Dr Kayne points out that alternative medicine is about whole-body health rather than just treating localised illness, which has long been the case in orthodox medicine. Patients certainly prefer to be treated as individuals rather than as machines, parts of which can be repaired when they go wrong. And they like the idea of systems of treatments which are based on human feelings and intuitions and remedies which come from nature, rather than on impersonal medical science and synthetic drugs. They are increasingly demanding alternative medicines and, so long as pharmacists are satisfied that they do no harm and patients are happy with the outcomes, they are serving their patients by providing them. To this end, Dr Kayne's book is an excellent source of knowledge and information to help pharmacists provide well-informed, sound and safe advice.

Alan Nathan is a Lecturer in Community Pharmacy Practice in the Department of Pharmacy, King's College London, with a background as a community pharmacist. He was a member of the Council of the Royal Pharmaceutical Society of Great Britain from 1986 to 2002. He is the author of *Non-prescription Medicines*, published by the Pharmaceutical Press and now in its 2nd edition.

**K. D. Rainsford, *Ibuprofen: a critical bibliographic review***

London: Taylor and Francis Limited, 1999. 590 pages  
hardback. £95.00  
ISBN 0748406948

*Reviewed by Lenard M. Lichtenberger, Houston, USA*

The search for the new "super aspirin" is far from a novel concept. Indeed, it was in this quest forty-five years ago, that a small group of pharmacologists at Boots Pure Drug Company of Nottingham, UK led by Stewart Adams initiated a meticulous analysis of the anti-inflammatory activity and side-effects of a large family of phenoxyalkanoic and phenylalkanoic acids which led to the ultimate discovery of ibuprofen. K. D. Rainsford, an eminent pharmacologist, who is Professor and Chair of Biomedical Sciences and Director of the Biomedical Research Center at Sheffield Hallam University in the UK, in a similarly meticulous and detailed manner takes the reader through the discovery of ibuprofen, one of the most understood and tested members of the class of non-steroidal anti-inflammatory drugs (NSAIDs) on record, from its initial pre-clinical trial (as RB 1472 and later BTS 13621), demonstrating the efficacy of the orally administered drug to attenuate UV-induced erythema in guinea pigs, to its release as the first NSAID to be marketed OTC in the mid 1980s, to a compilation of clinical studies performed over the past two decades.

Professor Rainsford should be complemented in writing and editing this book, which represents the most complete documentation of basic science and clinical research performed on ibuprofen, which remains one of the most efficacious and safe NSAIDs on the market today and the active ingredient in such highly consumed OTC drugs as Advil, Nuprin and Motrin, to name three of the one hundred or more brand names available in most of the countries of the world. This reviewer was particularly intrigued with the chapter written by the editor providing the historical background behind the development and discovery of ibuprofen during the "golden era" of NSAID discovery (1955–1970 when indomethacin, sulindac and diflunisal were also being developed), which interestingly predated the landmark papers of Sir John Vane and associates in the elucidation of NSAID induced inhibition of cyclooxygenase (COX) activity. Imbedded in this history are numerous lessons for the young scientist with regards to persistence, hard work, scientific insight and the ability to integrate one's research findings with those in the literature to make correct choices in the direction of a project of drug discovery. Equally impressive was the ability of the editor and his coauthors to compile the large body of work in the literature on ibuprofen into a cohesive story with regards to the drug's bioavailability, therapeutic activity and safety in both laboratory animals and human

subjects. The book comprehensively covers both the efficacy of ibuprofen to treat acute and chronic joint inflammation (rheumatoid arthritis and other chronic inflammatory diseases) and its wide-spread usage as an analgesic, as well as its less conventional applications to treat such diverse conditions as endometrial/vaginal inflammation, lung inflammation (including cystic fibrosis), colorectal and mammary cancer, gout, cataracts, Alzheimer's disease and related dementias. The editor and authors also spent considerable space discussing adverse reactions to ibuprofen and their mechanistic basis, naturally with a focus on the gastrointestinal, renal and hepatotoxicity of the drug, but also addressing lesser known ability of ibuprofen and other NSAIDs to potentially induce adverse reactions in the immune (allergic reactions), hematological (neutropenia, agranulocytosis, aplastic anemia), cardiovascular (angina, cardiac ischemia), reproductive (anovulation, interference with fetal implantation, impotence), and central nervous systems (aseptic meningitis, cognitive dysfunction, psychiatric adverse effects and visual disturbances). The subject of adverse drug interactions is also discussed with a focus on the ability of ibuprofen and related NSAIDs to interfere with the actions of anti-hypertensive, loop diuretics, anti-coagulant and hypoglycaemic drugs. In most cases, these side-effects are rare and generally related to the consumption of NSAIDs other than ibuprofen.

In summary, this book will serve as an excellent reference source on ibuprofen, this "work horse, blue collar" NSAID, that although threatened over the years has survived the next generation of "super aspirins" and the next, to come along. Speaking of which, it is the hope that the editor will continue to update this book with new editions, with the next one including one or more chapters on how this "tried and true" NSAID compares with the new family of selective COX-2 inhibitors (Coxibs) with regards to therapeutic efficacy (including new evidence of its efficacy to delay or lessen the devastating symptoms of Alzheimer's disease) when balanced against their ability to induce adverse reactions in the gastrointestinal tract and other systems, namely the renal, cardiovascular and central nervous systems.

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