

# CARDIAC DRUG THERAPY

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# CARDIAC DRUG THERAPY

*Seventh Edition*

*by*

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# DEDICATION

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*To My wife Brigid*

*and*

*To our children*

*Susan, Christine, Yasmin, Stephen, Jacqueline, and Natasha*

# PREFACE

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The impetus to provide a seventh edition of *Cardiac Drug Therapy* was generated by the positive comments received from readers worldwide, and from favorable reviews of earlier editions. The seventh edition updates and revises the sixth edition in several respects. In particular, the text includes: Six new chapters that deal with ongoing important controversies regarding the use of several widely used cardiac drugs.

Controversies have arisen regarding the use of beta blockers for the treatment of hypertension. The front cover of *The Lancet* November 4, 2005 highlighted “beta blockers should not remain first choice in the treatment of primary hypertension.” Is this statement true or false? In addition Trialists have indicated that beta blockers and diuretics cause an increased incidence of new diabetes; it appears that most experts in the field have endorsed this information. In the *Lancet*, January 2007, another faulty metaanalysis provides the same misleading information.

- The chapter Beta-Blocker Controversies gives substantial evidence that indicates to Clinicians that both preceding statements are false. In the chapter Beta-blockers, a section is given entitled “Which Beta Blocker is Best for Your Patients?”

New chapters include:

- ACE Inhibitor Controversies.
- Calcium Antagonist Controversies: The controversies regarding the use of calcium antagonists are further analyzed and clear directions are given to clinicians regarding when to choose a calcium antagonist, and which one to choose.
- Hypertension Controversies. There are more than one billion hypertensive individuals requiring drug therapy and only four classes of antihypertensive agents are available: diuretics, beta blockers, ACE inhibitors/angiotensin receptor blockers, and calcium antagonists. Alpha blockers and centrally acting agents have limited use. If it is true that both beta blockers and diuretics cause an increased incidence of new onset diabetes, then patient treatment would be compromised. Physicians worldwide are perplexed. This important area is clarified and treatment algorithms are given for the choice of drug based on the age and ethnicity of the hypertensive patient.
- The chapter Heart Failure Controversies discusses : heart failure preserved ejection fraction; is the combination of ACE inhibitor or ARB genuinely beneficial ? Recommended heart failure agents all cause bothersome lowering of blood pressure. Digoxin has been discarded by most who fail to recall that this is the only heart failure drug that does not lower blood pressure, and it can be used without causing toxicity because salutary effects are obtained with low serum digoxin levels 0.5–0.9 ng/mL particularly in patients with class III-IV heart failure.
- The chapter Statin Controversies explores rhabdomyolysis , interactions, and other issues.
- The chapter Hallmark Clinical Trials has been expanded to accommodate the wealth of practical information derived from these studies.

As in all previous editions, therapeutic strategies and advice are based on a thorough review of the scientific literature, applied logically:

- Scientific documentation regarding which drugs are superior.
- Information on which cardiovascular drugs to choose and which agents to avoid in various clinical situations.
- Information that assists with the rapid writing of prescriptions. To write a prescription accurately, a practitioner needs to know how a drug is supplied and its dosage. Thus, supply and dosage are given first, followed by action and pharmacokinetics, then advice as to efficacy and comparison with other drugs, indications, adverse effects, and interactions.
- The name of each drug, the formulation, and the dosage have been put in tabular format; this allows quick retrieval of the information required when writing prescriptions.
- An appendix provides a global table of cardioactive drugs with their generic and tradenames in North America, the UK, Europe, and Japan.
- The text contains practical advice, such as the following:

The life-saving potential of 75–160 mg chewable aspirin is denied to many individuals who succumb to an acute coronary syndrome because of poor dissemination of clinically proven, documented facts. The text advises: two ~ 80 mg chewable aspirins should be placed in the cap of a nitrolingual spray container to be used before proceeding to an emergency room. Clinicians should inform patients that rapidly acting chewable aspirin may prevent a heart attack or death but that nitroglycerin does not.

The dosages of drugs given in the text apply to the adult and are standard. Often, a lower dose than the manufacturer's recommended maximum is advised because in clinical practice a lesser dose suffices and results in fewer adverse effects, especially when medications are combined.

The information provided in the seventh edition should serve as a refresher for cardiologists and internists. The information should improve the prescribing skills of medical residents, general practitioners, and all who care for patients with cardiac problems.

*Acknowledgments:* First to Paul Dolgert Publishing Director at Humana Press, whom I sought to publish this work because he is without equal at his craft. He has made my book *Heart Disease Diagnosis and Therapy* a success and has agreed to do more for *Rapid ECG Interpretation* to be published in 2008. I thank him particularly for agreeing to display my material in a more user friendly format than that of the sixth edition. The pages are wider and the font enlarged. Now, crucial information can be rapidly retrieved and I feel fulfilled.

Also, to James Geronimo who expertly guided me through the production concerns and to Lisa Bargeman. *Lastly, a special, thank you, to my wife Brigid, who has allowed me to be a student of the science of Medicine to this day.*

*M. Gabriel Khan, MD*

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## ABOUT THE AUTHOR

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Dr. Khan's books have been translated into Chinese, Czech, Farsi, French, German, Greek, Italian, Japanese, Polish, Portuguese, Russian, Spanish, and Turkish. He has built a reputation as a clinician-teacher and has become an internationally acclaimed cardiologist through his writings.

His peers have acknowledged the merits of his books by their reviews of *Cardiac Drug Therapy*: Review of the 5th edition in *Clinical Cardiology*: "this is an excellent book. It succeeds in being practical while presenting the major evidence in relation to its recommendations. Of value to absolutely anyone who prescribes for cardiac patients on the day-to-day basis. From the trainee to the experienced consultant, all will find it useful. The author stamps his authority very clearly throughout the text by very clear assertions of his own recommendations even when these recommendations are at odds with those of official bodies. In such situations the 'official' recommendations are also stated but clearly are not preferred."

And for the fourth edition a cardiologist reviewer states that it is "by far the best handbook on cardiovascular therapeutics I have ever had the pleasure of reading. The information given in each chapter is up-to-date, accurate, clearly written, eminently readable and well referenced."