Preface

For the generation that reached sexual maturity in the 1960s, the "pill" became synonymous with sexual freedom and started a sexual revolution. For women it meant freedom from the fear of pregnancy, and for men enhanced sexual opportunity. The new era of the pill has nothing to do with fertility, but everything to do with sex. The first orally effective prescription drug for treating erectile dysfunction (ED) was marketed in 1998. Sildenafil (Viagra®) has rejuvenated the aging male veterans of the sexual revolution, forever changed the science of sexual medicine, and transformed society's perspective on aging and sex. This class of drugs, known as oral phosphodiesterase inhibitors (PDE-type 5), is highly effective in the treatment of ED. Since its introduction there has been a much greater awareness of ED, its comorbidities, and its effects on the quality of life. In 1997, while preparing to address the Endocrine Society on the occasion of the 92nd American Urological Association meeting, I first looked at the preclinical studies of sildenafil. I thought "this will change everything" and it clearly has—changing practice patterns in sexual medicine, and the attitudes of patients, potential patients, and their partners. Two new PDE-type 5 inhibitors, tadalafil (Cialis®) and vardenafil (Levitra®), were first approved by the European Committee for Proprietary Medicinal Products and subsequently by the Food and Drug Administration in 2003 and 2004.

The new PDE-5 inhibitors have given health care providers a choice in prescribing therapy for ED, but it remains to be seen whether these or subsequent agents will provide the opportunity to treat more patients or, for that matter, to treat the same patients more effectively and safely. Pharmacological management of ED can now be given as a tablet, as a sublingual preparation, as an intraurethral pellet, as a topical gel, and as an injection. Current lines of study are looking at inhalation as a faster route of treatment delivery. These various drugs work through differing physiological mechanisms: amplifying penile blood flow elicited by sexual stimulation, enhancing neural signaling, and in some instances can even induce erection without sexual stimulation.

The 1970s saw the development of safe and effective surgery; the penile implant was a specific surgical solution addressing only one aspect of male sexual dysfunction. This compendium addresses each aspect of male sexual dysfunction: interest, performance, and orgasm. With the advent of oral

medications, the burden of first evaluation has fallen on the primary care provider. *Oral Pharmacotherapy for Male Sexual Dysfunction* is written for the urologists, family physicians, internists, and residents-in-training who need to be familiar with the diagnostic approaches to male sexual dysfunction and pharmacological strategies for its safe and effective management.

Oral Pharmacotherapy for Male Sexual Dysfunction begins with a review of penile anatomy, physiology, and pharmacology written by Dr. Tom Lue, who first described the hemodynamics of erection, and inspired me some 20 years ago to take up this subspecialty. Dr. John Mulhall of Cornell University addresses common medical risk factors for ED, and the controversial issue of whether lower urinary tract symptoms independent of aging are causally linked to ED? Dr. Irwin Bischoff has devoted a lifetime of effort to pharmaceutical research, and I am grateful that prior to his retirement he accepted this task of summarizing the pharmacology and development of PDE-type 5 inhibitors. Dr. Harin Padma-Nathan has a unique practice devoted to clinical trials, and shares his insights on the preclinical data and five years postmarketing data on sildenafil. Dr. Culley Carson of the Department of Urology at the University of North Carolina has been extensively involved with the design and conduct of US clinical trials of tadalafil. Dr. Ajay Nehra, a consultant for Mayo Clinic, independently reviews the preclinical data on vardenafil. Dr. Louis Kuritzky from the Department of Family Medicine University of Florida, is a lecturer, teacher, and advocate of sexual health in the primary care setting. Dr. Ira Sharlip is a practicing urologist in San Francisco and past president of the Sexual Medicine Society of North America; he addresses who should be referred to a urologist and shares his strategy on how to evaluate and manage men who have atypical presentations that require focused testing. Dr. Robert Kloner of the Keck School of Medicine at the University of Southern California describes how to assess the risk of sexual function in the cardiac patient and just how safe PDE inhibitors are for these men. Dr. Vivian Fonseca of Tulane University tackles the complex pathophysiology of diabetic ED and reviews treatment outcomes in this difficult patient group. Dr. Raymond Rosen, author of a widely used research instrument, the International Index of Erectile Function, specifically looks at the epidemiology of depression and ED, and reviews the mechanisms of antidepressant-associated ED. Dr. Wayne Hellstrom of Tulane University reviews the literature on intracavernous, transurethral therapies, and on topical therapies. Dr. Hellstrom further provides a strategy for using combinations of drugs in refractory patients. Drs. Alvaro Morales, Jeremy Heaton, and Michael Adams of Queens University, Ontario, Canada

together review the impact of androgen deficiencies, the neural regulation of erection, and neuropharmacological therapies for ED. I have asked Dr. Ronald Lewis, of the Division of Urology at the Medical College of Georgia to write the only chapter on vacuum erection devices and surgical implants; despite the abundance of drugs for ED, every clinician should be familiar with these options and outcomes. Every day in my practice I am confronted by patients who self-medicate with dietary supplements; every clinician will appreciate Dr. Mark Moyad's review of this topic and for addressing lifestyle changes in the management of male sexual health. No one in the United States can match the clinical experience of my Australian colleague Dr. Chris McMahon; he reviews the topic of rapid ejaculation and the emerging pharmaceutical therapies for its management. Dr. Andrew McCullough of New York University reviews the literature on prostatectomy; he shares his prospective series on these patients giving us an idea of the pathophysiology, natural rates of recovery, and medical management of post-prostatectomy ED. The last chapter is written by Dr. Ridwan Shabsigh of Columbia University. Female sexual dysfunction (FSD) is emerging as a new subspecialty. I have challenged Dr. Shabsigh to share what is currently known about the types of FSD and its epidemiology, pathophysiology, and current treatments.

I am indebted to all the authors for the year they have spent compiling these reviews and I know the readers will learn much from their various treatment strategies for male sexual dysfunction.

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