Testosterone

Action, Deficiency, Substitution

Fourth Edition
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## Contents

*List of contributors* vii  
*Preface* xi  

1 The medical and cultural history of testosterone and the testes 1  
   Eberhard Nieschlag and Susan Nieschlag  

2 Testosterone: biosynthesis, transport, metabolism and (non-genomic) actions 15  
   C. Marc Luetjens and Gerhard F. Weinbauer  

3 Pathophysiology of the androgen receptor 33  
   Olaf Hiort, Ralf Werner, and Michael Zitzmann  

4 Methodology for measuring testosterone, dihydrotestosterone and sex hormone-binding globulin in a clinical setting 60  
   Manuela Simoni, Flaminia Fanelli, Laura Roli, and Uberto Pagotto  

5 The behavioral correlates of testosterone 87  
   John Bancroft  

6 The role of testosterone in spermatogenesis 123  
   Liza O'Donnell and Robert I. McLachlan  

7 Androgens and hair: a biological paradox with clinical consequences 154  
   Valerie Anne Randall  

8 Testosterone and bone 177  
   Dirk Vanderschueren, Mieke Sinnesael, Evelien Gielen, Frank Claessens, and Steven Boonen  

9 Androgen effects on the skeletal muscle 191  
   Shalender Bhasin, Ravi Jasuja, Carlo Serra, Rajan Singh, Thomas W. Storer, Wen Guo, Thomas G. Trivison, and Shezad Basaria  

10 Testosterone and cardiovascular disease 207  
    Kevin S. Channer and T. Hugh Jones  

11 Testosterone, obesity, diabetes and the metabolic syndrome 235  
    T. Hugh Jones and Kevin S. Channer  

12 Testosterone and erection 251  
    Mario Maggi and Hermann M. Behre  

13 Testosterone and the prostate 268  
    John T. Isaacs and Samuel R. Denmeade  

14 Clinical use of testosterone in hypogonadism and other conditions 292  
    Eberhard Nieschlag and Hermann M. Behre  

15 Testosterone preparations for clinical use in males 309  
    Hermann M. Behre and Eberhard Nieschlag  

16 Androgens in male senescence 336  
    Jean-Marc Kaufman, Guy T’Sjoen, and Alex Vermeulen  

17 Androgen therapy in non-gonadal disease 372  
    David J. Handelsman  

18 Review of guidelines on diagnosis and treatment of testosterone deficiency 408  
    Ronald S. Swerdloff and Christina C. L. Wang  

19 Pathophysiology of estrogen action in men 421  
    Vincenzo Rochira, Daniele Santi, and Cesare Carani  

20 Dehydroepiandrosterone and androstenedione 437  
    Bruno Allolio, Wiebke Arlt, and Stefanie Hahner  

21 The state-of-the-art in the development of selective androgen receptor modulators 459  
    Ravi Jasuja, Mikhail N. Zacharov, and Shalender Bhasin
| Contents |
|------------------|------------------|
| 22 **The essential role of testosterone in hormonal male contraception** 470  | 25 **Sequelae of doping with anabolic steroids** 535  |
| Eberhard Nieschlag and Hermann M. Behre  | Elena Vorona and Eberhard Nieschlag  |
| 23 **Testosterone use in women** 494  |  |
| Susan R. Davis  |  |
| 24 **Detection of illegal use of androgens and selective androgen receptor modulators** 517  |  |
| Wilhelm Schänzer and Mario Thevis  |  |
| Index 547  |  |
| Color plate section between pages 244 and 245  |  |
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Preface

Testosterone is the focal point of male reproductive health. Testosterone is responsible for all male characteristics, and testosterone deficiency results in hypogonadism which has an impact on the entire male organism. Testosterone plays an important role in male aging. Many diseases, especially mood disorders, cardiovascular diseases and the metabolic syndrome can be caused by testosterone deficiency, but can also result in hypogonadism. Consequently, testosterone is a key factor in the treatment of male disorders; benefits and risks of such treatment need to be balanced. The potent effects of testosterone also give rise to their misuse, prompting the establishment of sensitive detection systems, but also bearing adverse side-effects. Measuring testosterone in body fluids based on immunoassays was the basis for research in male pathophysiology over decades; however, methodology is currently shifting to gas or liquid chromatography tandem mass spectrometry. The hopes for a male hormonal contraceptive rest on testosterone as its major constituent. As estrogens derived from testosterone play a role in male physiology, testosterone also is of importance for general and sexual health in women. Finally, new therapeutic applications are expected from selective androgen receptor modulators (SARMs).

A tremendous amount of new knowledge has accumulated over the eight years since the third edition of this book on testosterone appeared. The 25 chapters of the current volume, written by worldwide leading experts in their field, encapsulate this progress. The book appeals to the clinician as well as to the basic scientist wishing for an authoritative overview of this central area of male reproductive health.

In order to synchronize the writing of the various chapters, the authors assembled at Castle Hohenkammer in Bavaria in October 2011 for three days, and finalized their writings during that time. This served to unify the work as a whole, and ensures that it represents the most up-to-date reference source on testosterone and its many facets. This coordinated effort of all contributors guarantees a long half-life of this book as an up-to-date reference source.

The editors wish to thank the authors of the various chapters for their excellent compliance and timely submission of manuscripts. We could not have concluded this task without the tireless reading capacity and help from Susan Nieschlag, who as a professional edited all manuscripts; nor would the volume have come to fruition without the skilful assistance of our secretaries Maria Schalkowski and Ina Nelles, who processed the manuscripts expeditiously. Finally, the project and the meeting would not have been possible without the generous support from Bayer Health Care (formerly Bayer Schering Pharma), the International Society of Andrology (ISA), the European Academy of Andrology (EAA), the German Association for Reproductive Health, the Clinical Research Group for Reproductive Medicine, Galen Pharma, Merck Serono, Ferring Pharmaceuticals and our home institutions, the Centers for Reproductive Medicine and Andrology at the Universities of Münster and Halle.