

Eberhard Nieschlag  
Hermann M. Behre  
Susan Nieschlag  
*Editors*

# Andrology

Male Reproductive  
Health and Dysfunction

3rd, Completely Revised  
and Updated Edition

 Springer

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Susan Nieschlag  
(Editors)

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Male Reproductive Health  
and Dysfunction

3rd Edition

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## Preface to the 3rd Edition

The decade that has passed since publication of the second edition of this textbook has not only witnessed a tremendous increase in knowledge within the field of andrology, but also seen the field itself achieve a newfound status within the medical profession. Knowledge and status have been of mutual benefit to the field and the growing critical mass of diagnostic and therapeutic possibilities have caused andrology to be recognized as a medical subspecialty in some countries such as Germany, Poland, and Estonia. The European Academy of Andrology (EAA) served as a pacemaker for this development and continues to strive for establishment of andrology as a clinical field. Well-designed curricula and qualifying examinations have contributed to the official recognition of andrology as a speciality. This recognition of the field helps patients with andrological problems to find the specialist they seek.

This textbook summarizes the current state of knowledge in the field of andrology. It is a source of knowledge to all those who are or want to become andrologists. In addition, as andrology is clearly an interdisciplinary field, this book may serve as a compendium and source of reference for all those physicians and biologists active in neighboring areas, who want to obtain an overview of andrology and who require information on special problems. The extensive references are timely and up to date.

The majority of authors of the previous two and the current third edition of this book are coworkers or collaborators of the Institute of Reproductive Medicine of the University of Münster, which was renamed the Centre for Reproductive Medicine and Andrology of the University in 2008. The “Münster School of Andrology” provides the common basis of the work rooted in over 30 years of scientific and practical experience.

The editors are indebted to the authors for their input in creating this third edition. We also thank the Springer team, especially Dörthe Mennecke-Bühler and Claus-Dieter Bachem for producing this attractive volume. Maria Schalkowski (Münster) deserves special mention for her untiring efforts to make this book become a reality.

Eberhard Nieschlag  
Herrman M. Behre  
Susan Nieschlag  
Münster and Halle  
October 2009

## Preface to the 2nd Edition

Andrology, as the science of male reproductive function and dysfunction, has experienced exceptional progress in recent years. Especially clinical applications of molecular biology and molecular genetics to male infertility and hypogonadism, the “invention” of intracytoplasmic sperm injection (ICSI) as a treatment of male infertility and the introduction of effective oral medication for erectile dysfunction can be considered major breakthroughs. The magnitude of these developments, along with many others, prompted this second edition of *Andrology: Male Reproductive Health and Dysfunction*.

As in the first edition, the textbook follows the principles of evidence-based medicine and provides a firm scientific basis for clinical andrology. As before, we consider andrology as part of the comprehensive field of reproductive medicine, but we are convinced that it can coexist alongside gynecology only when it qualifies as a scientific and clinical field in its own right. For this reason this textbook seeks to strengthen andrology as a field, along with acting as a source of information.

All chapters have been thoroughly revised and extended; some were completely rewritten. Among the new features: the diagnostic sections reflect the newest WHO guidelines on semen analysis (1999); the sections on testicular biopsy were enlarged by a contribution from Professor A.F. Holstein (Hamburg); the pathophysiological basis of numerous disease entities is explained by insights newly gained from molecular biology and molecular genetics; ICSI treatment and its genetic ramifications are thoroughly discussed; other therapeutic methods, especially the treatment of varicocele, have been brought up to date. Without disregarding the art of exact diagnosis, medical treatment of erectile dysfunction is covered in detail. Because of increasing interest, the chapters on male contraception and male senescence have been expanded. As in the earlier edition, a chapter on the ethical aspects of reproductive medicine completes the picture. The layout of the first edition, with typographical features designed for the reader’s orientation, has been maintained and is supplemented with color illustrations and figures, contributing to a lively presentation.

In order to provide a uniform work, we selected authors who are either past or current colleagues at the Institute of Reproductive Medicine at the University of Münster or who work at collaborating centers. The interest shared by the authors contributed to a uniform presentation of andrology and prompted reviewers of the first edition to speak of a “Münster School of Andrology.” The editors are grateful to all contributors for their excellent cooperation. As before, Susan Nieschlag, M.A., as editorial assistant, contributed a high degree of professionalism and tireless effort to this second edition. The word-processing skills of Angelika Schick, Barbara Bahnes, and Maria Schalkowski, secretaries at the Institute, deserve special mention. Particular

thanks go to Dr. Trevor Cooper and Dr. Andrea Wagenfeld for their punctilious and professional review of all manuscripts. Finally, we are grateful to Dr. Udo Lindner, Dr. Annette Zimpelmann, and Axel Treiber of Springer-Verlag for their enthusiastic support of the present volume. They encouraged our input, which was rewarded by speedy production of the volume.

Many suggestions for the second edition were provided by reviewers and readers, and we gratefully incorporated their ideas. This dialogue was particularly helpful and we would like to repeat our earlier request for critical suggestions. We hope that the reader will again use this volume to his own advantage and to that of his patients.

Eberhard Nieschlag  
Hermann M. Behre  
Münster, February 2000

## Preface to the 1st Edition

The present volume sets forth the basic principles and the clinical practice of andrology as the science of male reproductive health and dysfunction.

This book is to be viewed against the background of the development of reproductive medicine and andrology at our center in Munster, Germany. Following the establishment of the Clinical Research Group for Reproductive Medicine by the Max Planck Society in 1980, which was succeeded by the Institute of Reproductive Medicine at the Westphalian Wilhelms University in Munster in 1989, a center of andrological research and patient care developed, based on close cooperation between basic scientists and physicians. This close cooperation between basic research and clinical practice aims to apply scientific methods to explore the reproductive functions of the male and to harness them for mankind, both in positive and negative terms. The combination of research and patient care necessitates close contact between university clinics and institutes, in particular, the Women's Hospital, Department of Urology, Institute of Human Genetics, Institute for Clinical Radiology, Institute for Medical Microbiology, and Institute for Medical Psychology. In addition, the Institute of Reproductive Medicine participates in the network of the WHO Collaborating Centers (since 1987) and the Training Centers for Clinical Andrology of the European Academy of Andrology (since 1994).

Over the course of time we have accumulated experience in patient care and have developed clinical principles, which have been published in numerous articles, reviews, and book chapters. We consider the time ripe to present our experience and view of andrology in a textbook.

In order to present a unified volume we chose our authors either from past or present coworkers of the Institute of Reproductive Medicine or from cooperating institutions. Past or present coworkers include Dr. Martin Brinkworth, Dr. M. Angelines Castel, Dr. Trevor G. Cooper, Dr. Jorg Gromoll, Dr. Axel Kamischke, Dr. Eckhard Leifke, Priv.-Doz. Dr. Alexander Lerchl, Dr. Carl-Joachim Partsch, Dr. Claus Rolf, Dr. Manuela Simoni, Priv.-Doz. Dr. Gerhard F. Weinbauer, and Dr. Ching-Hei Yeung as well as Priv.-Doz. Dr. Christian De Geyter, Dr. Maria De Geyter, Dr. Sabine Kliesch, Priv.-Doz. Dr. Ulrich A. Knuth, and Dr. Dieter Meschede. Professor David J. Handelsman spent a 9-month sabbatical at our Institute while the book was being written. Intensive cooperation with the Women's Hospital under the directorship of Professor Dr. Hermann P. G. Schneider is of essential importance for patient care. We are closely connected to the University Urology Clinic, and this cooperation is reflected in the authorship of Professor Dr. Lothar Hertle, Priv.-Doz. Dr. Hermann van Ahlen, and Dr. Frank Oberpenning. Our patients receive psychological counseling from Professor Dr. F.A. Muthny, and Dr. Regina Oberpenning, of the Institute of

Medical Psychology. Professor Dr. Klaus Demmer, a native of Munster, has advised the Institute on ethical questions for many years. Susan Nieschlag, M.A., serves as the Institute's editor and has contributed editorial input for this volume as well. She has translated some chapters in their entirety and language-edited all others. We hope that the intellectual background shared by the authors will help to present a unified picture of andrology in this book. We thank all authors for their speedy cooperation. Strict adherence to deadlines contributed to the volume's unified appearance and to its timeliness. The Institute's secretaries, Kerstin Neuhaus, and Angelika DÜthmann deserve a great measure of thanks for word processing. Thanks too go to the members of the Springer Publishing House, Dr. Carol Bacchus, Marga Botsch, and Bernd Reichenthaler, who were responsible for the book's appearance and prompt handling. We hope that the reader will use this volume to his own advantage and to that of his patients. We are grateful for all comments and criticism.

E. Nieschlag and H. M. Behre  
Münster  
November 1996

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