The ESSM Manual of Sexual Medicine
Written by the ESSM Educational Committee

Editors:
Y. Reisman
H. Porst
L. Lowenstein
F. Tripodi
P.S. Kirana

- 2nd updated edition 2015 -
The ESSM Manual of Sexual Medicine
The ESSM Manual of Sexual Medicine

- 2nd updated edition 2015 -

Written by the ESSM Educational Committee:

Giovanni Corona (I)       John Dean (GB)
Lior Lowenstein (IL)       Hartmut Porst (D)
Natalio Cruz (S)           Ilan Gruenwald (IL)
Fabrizio Palumbo (I)       Yacov Reisman (NL)
Beatrice Cuzin (F)         Paraskevi-Sofia Kirana (G)
Francesca Tripodi (I)      Paraskevi-Sofia Kirana (Evie) Kirana

Yacov Reisman
MD, PhD, FECSM,
Urologist, Sexologist
Chairman Men’s Health
Clinic’s, Amstelland
Hospital, The
Netherlands

Hartmut Porst
MD, FECSM,
Urologist

Lior Lowenstein
MD, MS, FECSM,
Gynecologist
Professor in Obstetrics
and Gynecology,
Deputy Chairman
of the Department
in Obstetrics and
Gynecology, Ruth
and Bruce Rappaport
Faculty of Medicine,
Rambam Health Care
Campus, Haifa, Israel

Francesca Tripodi
PsyD, ECPS,
Psychotherapist,
Sexologist
Institute of Clinical
Sexology, Rome, Italy

Paraskevi-Sofia Kirana
PGDip, MSc, PhD, ECPS,
Health Psychologist-
Sexologist
Centre for Sexual and
Reproductive Health,
Aristotle University
and Private practice for
Psychosexual therapy,
Thessaloniki, Greece
Contributor Details

Maarten Albersen MD, PhD
Laboratory for Experimental Urology, Department of Development and Regeneration, KU Leuven and University Hospitals, Leuven, Belgium

Carlo Bettocchi, MD, FECSM
Urology Andrology and Kidney transplant Unit
Policlinico-University of Bari, Italy

Yechiel Z Burke, MD
Specialist Trainee (Resident)
Rambam Medical Center, Israel

Giovanni Corona, MD, PhD, FECSM
Endocrinology Unit
Medical Department, Azienda USL di Bologna, Italy

Natalio Cruz, MD, FECSM
Head of Andrology
University of Seville, Spain
Hospital Universitario Virgen del Rocio ANDROMEDI. Clinica de Fatima
Department of Urology, Spain

Beatrice Cuzin, MD, MSc, FECSM
Hospital practitioner
University of Lyon, France

John Dean, MD, FECSM
Clinical Director, Gender & Sexual Medicine
Devan Partnership NHS Trust
The Laurels Clinic, UK

Giulio Garaffa, MD, FECSM
Senior lecturer in Urology, consultant urologist
Broomfield Hospital, Broomfield, Chelmsford, Essex, UK

Janniko R. Georgiadis, PhD
Department of Neuroscience / Section Anatomy
University Medical Center Groningen (UMCG), University of Groningen, The Netherlands

Sidney Glina, MD
Department of Urology
Instituto H. Ellis, São Paolo, Brazil

Ilan G. Gruenwald, MD, FECSM
Associate Professor of Urology
The Technion: The Israeli Institute of Technology, Haifa, Israel

Paraskevi-Sofia (Evie) Kirana, PGDip, MSc, PhD, ECPS
Health Psychologist-Sexologist
Center for Sexual and Reproductive Health, Aristotle University of Greece and Private practice for Psychosexual therapy, Thessaloniki, Greece

Ahinoam Lev-Sagie, MD
Department of Obstetrics and Gynecology
Hadassah-Hebrew University Medical Center, Jerusalem, Israel.

Lior Lowenstein, MD, MS, FECSM
Associate Professor in Obstetrics and Gynecology
Deputy Chairman of the Department in Obstetrics and Gynecology
Ruth and Bruce Rappaport Faculty of Medicine, Rambam Health care Campus, Haifa, Israel

Mario Maggi, MD, PhD
Full professor of Endocrinology
Sexual Medicine and Andrology Unit, Department of Experimental and Clinical Biomedical Sciences, University of Florence, Florence, Italy
# Contents

## Preface

### Part 1 – General considerations

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The history of sexual medicine</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>By Dirk Schultheiss and Sidney Glina</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Male genital anatomy and physiology</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>By Ilan Gruenwald</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Anatomy and physiology of female sexual organs</td>
<td>40</td>
</tr>
<tr>
<td></td>
<td>By Beatrice Cuzin</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Sexual response in men and women: models and critical issues</td>
<td>68</td>
</tr>
<tr>
<td></td>
<td>By Francesca Tripodi, Ilan Gruenwald, Cinzia Silvaggi and Chiara Simonelli</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Sex and Brain</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td>By Janniko R Georgiadis</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Sexual orientation</td>
<td>126</td>
</tr>
<tr>
<td></td>
<td>By John Dean</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Sexuality and childhood</td>
<td>135</td>
</tr>
<tr>
<td></td>
<td>By Linda Vignozzi, Mario Maggi and Giovanni Corona</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Sexuality in the elderly population</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td>By Giovanni Corona and Mario Maggi</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>The female hypothalamic-pituitary-gonadal axis</td>
<td>194</td>
</tr>
<tr>
<td></td>
<td>By Giovanni Corona and Mario Maggi</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Let’s talk about sex: taking a sexual history</td>
<td>218</td>
</tr>
<tr>
<td></td>
<td>By Yacov Reisman</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Physical examination in sexual medicine</td>
<td>294</td>
</tr>
<tr>
<td></td>
<td>By Emmanuel Weyne and Maarten Albersen</td>
<td></td>
</tr>
<tr>
<td>11a</td>
<td>Physical examination in sexual medicine, part I: Male</td>
<td>286</td>
</tr>
<tr>
<td></td>
<td>By Emmanuel Weyne and Maarten Albersen</td>
<td></td>
</tr>
<tr>
<td>11b</td>
<td>Physical examination in sexual, medicine, part II: Female</td>
<td>297</td>
</tr>
<tr>
<td></td>
<td>By Ahinoam Lev-Sagie and Arik Shechter</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Psychosexual treatment methods in sexual medicine</td>
<td>308</td>
</tr>
<tr>
<td></td>
<td>By Paraskevi-Sofia (Evie) Kirana</td>
<td></td>
</tr>
</tbody>
</table>

## Part 2 – Male sexual disorders

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>13</td>
<td>Hypoactive sexual desire (libido) disorder</td>
<td>322</td>
</tr>
<tr>
<td></td>
<td>By Giovanni Corona, Francesca Tripodi, Yacov Reisman and Mario Maggi</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Hormonal disorders and male sexual dysfunction</td>
<td>355</td>
</tr>
<tr>
<td></td>
<td>By Giovanni Corona and Mario Maggi</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Erectile dysfunction (ED)</td>
<td>416</td>
</tr>
<tr>
<td></td>
<td>By Hartmut Porst</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Ejaculatory/orgasmic disorders in men</td>
<td>533</td>
</tr>
<tr>
<td>16a</td>
<td>Basic anatomy and physiology of ejaculation, classification of ejaculatory disorders</td>
<td>534</td>
</tr>
<tr>
<td></td>
<td>By Hartmut Porst and Natalio Cruz</td>
<td></td>
</tr>
<tr>
<td>16b</td>
<td>Premature ejaculation</td>
<td>544</td>
</tr>
<tr>
<td></td>
<td>By Hartmut Porst</td>
<td></td>
</tr>
<tr>
<td>16c</td>
<td>Ejaculatory &amp; orgasmic disorders other than premature ejaculation disorders</td>
<td>594</td>
</tr>
<tr>
<td></td>
<td>By Natalio Cruz and Hartmut Porst</td>
<td></td>
</tr>
</tbody>
</table>
### Andrological emergencies

- **Injuries to penis and testicles**
  - By Natalio Cruz

### Priapism

- By Natalio Cruz

### Peyronie’s disease

- Peyronie’s disease (PD) – Morbus de la Peyronie Part I: etiology, epidemiology, clinical evaluation and conservative therapy
  - By Hartmut Porst, Giulio Garaffa and David Ralph

### Peyronie’s disease, part II: Surgical management

- By Giulio Garaffa, Hartmut Porst and David J Ralph

### Other penile disorders

- **Micropenis**
  - By Fabrizio Palumbo, Michele Tedeschi and Antonio Vavallo

- **Congenital penile curvature and penile torsion**
  - By Natalio Cruz

- **Hypospadias**
  - By Natalio Cruz

- **Phimosis**
  - By Natalio Cruz

### Prostate diseases, Chronic Pelvic Pain and sexual health

- **BPH/LUTS and Sexual Dysfunction**
  - By Yacov Reisman

- **Sexual dysfunctions in chronic pelvic pain (CPP)**
  - By Yacov Reisman

- **Prostate cancer and sexual dysfunction**
  - By Yacov Reisman

### Contraception and male sexuality

- By Beatrice Cuzin

### Part 3 – Female sexual disorders

- **Sexual desire and arousal disorders in women**
  - By Paraskevi-sofia (Evie) Kirana

- **Female orgasmic disorders (FOD)**
  - By Christina Damsted Petersen

- **Sexual pain disorders**
  - By Christina Damsted Petersen

- **Female external genitals disorders**
  - By Beatrice Cuzin

- **Female sexual function in midlife**
  - By Christina Damsted Petersen

- **Contraceptive methods and sexual function**
  - By Lior Lowenstein, Natalie Weeg and Arik Shechter

- **Changes in sexual function in relation to pregnancy and the postpartum period**
  - By Yechiel Z. Burke, Natalie Weeg and Lior Lowenstein

- **Female sexual function and gynecological disorders**
  - By Lior Lowenstein and Itamar Netzer
<table>
<thead>
<tr>
<th>Part 4 – Mixed Topics</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Gender incongruence and dysphoria</td>
<td>1005</td>
</tr>
<tr>
<td>31 Non-intercourse sexual behaviors, differing sexual preferences and paraphilias</td>
<td>1025</td>
</tr>
<tr>
<td>32 Problematic Hypersexuality</td>
<td>1034</td>
</tr>
<tr>
<td>33 Dermatologic disease of the external genitalia</td>
<td>1072</td>
</tr>
<tr>
<td>34 Cancer and sexuality</td>
<td>1092</td>
</tr>
<tr>
<td>34a Cancer and sexuality: general considerations</td>
<td>1093</td>
</tr>
<tr>
<td>34b Sexual rehabilitation after pelvic surgery</td>
<td>1127</td>
</tr>
<tr>
<td>35 Iatrogenic sexual dysfunction</td>
<td>1151</td>
</tr>
<tr>
<td>36 Basics on sexually transmitted disease/HIV and their effect on sexuality</td>
<td>1171</td>
</tr>
</tbody>
</table>

Colophon | 1222 |
Preface

The European Society for Sexual Medicine (ESSM) was founded in 1995 named at that time the European Society for Impotence Research (ESIR). In 20 years the ESSM has become a very active society with more than 1,800 members, currently by far the largest continental society in this field. The annual congresses of ESSM build the ideal platform for between 1,200 and over 2,000 participants for extensive exchange of the newest science in the field of Sexual Medicine and other related disciplines. Apart from this continuing exchange of the newest knowledge in this field, ESSM’s main focus is the education of young colleagues interested in Sexual Medicine to prepare them for the routine management of patients presenting at their practices and hospitals because of sexual problems. All of these activities aim at the highest standard of care and science considering the rules of evidence based medicine.

In 2007 the first Oxford school of Sexual Medicine was initiated by the ESSM with an annual two-week basic course of intensive education in Sexual Medicine followed by additional upgrade courses. The ESSM School has meanwhile developed into an international institution with increasing numbers of participants from all continents of the world.

With the 2011 annual congress, ESSM implemented a three-day ABC Master Course on all aspects of Sexual Medicine later on complemented by workshops covering special topics in Sexual Medicine and organized by leading experts in the field.

In 2011 a Multidisciplinary Joint Committee on Sexual Medicine (MJCSM) under the auspices of the UEMS (Union Européenne des Médecins Spécialistes) was convened on the initiative of ESSM to set the administrative and legal basis for an European qualification examination in Sexual Medicine. In 2012 the first qualification examination took place. Members of the MJCSM are representatives of the European Board of Urology, Gynaecology and Obstetrics, Psychiatry and recently joined by Endocrinology.

Furthermore ESSM collaborates since 2012 with the European Federation of Sexology (EFS) aiming to improve education and qualification in Sexology. In 2013 the EFS-ESSM syllabus of Clinical Sexology was published, one year after the publication of the first edition of the ESSM syllabus of Sexual Medicine, and the first qualification exam for psycho-sexologist took place.

As continuation of these education efforts, this new second edition of the syllabus of Sexual Medicine, renamed “The Manual of Sexual Medicine”, covering all aspects in Sexual Medicine of both sexes has now been completed by the educational committee of the ESSM with an update of the literature until the end of 2014.

The content of the curriculum for Sexual Medicine is still not identified by the MJCSM and at present this Manual of Sexual Medicine is the only textbook available preparing attendees for the exam and their daily routine work. When starting this project in 2011 the educational committee decided to regularly update this comprehensive and indeed world-wide unique opus. Lying in front of you is the result of this challenging work: “The Manual of Sexual Medicine”. Without any doubt this comprehensive textbook covers all aspects of Sexual Medicine and should be considered a “must have” for all colleagues either interested in passing the European exam in Sexual Medicine or just in updating themselves in this special medical discipline to serve their patients with sexual problems at the highest available clinical standard in this field. The authors of this comprehensive opus, mainly members of the ESSM Educational Committee, were ambitiously dedicated to this challenging project to provide the best clinical textbook in this field, but knowing at the same time that it may still not be perfect. Aware of the fact that some minor content may be missing or is incomplete, this manual is intended to become a permanently updated work adding the most recent and important developments and knowledge on a regular basis by the responsible author groups. This manual is primarily edited as a digital book, allowing our members to have easy access wherever and whenever they like.
The content of the manual is diversified in four sections:

I. General considerations in Sexual Medicine, including history, anatomy, physiology, endocrinology and psychology as well as sexual development and orientation.

II. Male sexual disorders and considerations.

III. Female sexual disorders and considerations.

IV. Mixed topics including gender dysphoria, hypersexuality, paraphilias, cancer and sexuality and sexually transmitted diseases.

Each chapter addresses a specific disorder, including an introduction to the field, definition and description of the disorder, prevalence and risk factors, assessment strategies, and recommendations for treatment.

We are grateful to the authors of this outstanding piece of medical science who sacrificed their free time and contributed to this opus with their expertise and intellect. We hope that you, will find this volume informative useful and exciting, both to prepare yourself for the exam and to support you in your daily routine work with patients seeking your expertise in this field. Moreover, we also would like to thank all the authors and the members of the ESSM executive committee for their support and the International Society for Sexual Medicine (ISSM) for the financial support of the publishing work through the Zorgniotti grant.