

SECTION ONE. STRUCTURE AND FUNCTION

1. Anatomy of Female Pelvic Support..... 3

Sandra S. Retzky, D.O., Robert M.
Rogers, Jr., M.D., and A. Cullen
Richardson, M.D.

Bones and Ligaments 3

Muscles and Parietal Fascia 9

Endopelvic Fascia 15

2. Structure and Function of the Lower Gastrointestinal Tract 22

Sang-Jeon Lee, M.D., Ph.D., Alan P.
Meagher, M.D., and John H.
Pemberton, M.D.

SECTION TWO. PRELIMINARY EVALUATION

4. Initial Evaluation and Physical Examination 41

B.L. Shull, M.D.

History 41

Urogenital History 42

Physical Examination 42

Gynecologic Pelvimetry 48

Contents

FUNCTION	1
Structure of the Colon	22
Structure of the Rectum and Anus ...	24
Function of the Colon	31
3. Clinically Relevant Neuroanatomy	33
Linda T. Brubaker, M.D., and J. Thomas Benson, M.D.	
General Terminology	33
Mechanisms of Injury	34
Clinical Effects of Neuroanatomic Lesions	36
FUNCTION	39
5. First-Line Testing of Patients with Urinary Incontinence	50
Nicolette S. Horbach, M.D.	
Urinalysis and Urine Culture	50
Direct Observation of Urethrovesical Junction Mobility	51
Stress Test	52
Cystometry	52
Uroflowmetry	55
Pad Test	56

SECTION THREE. DIAGNOSTIC ADJ

6. Multichannel Urodynamic Testing 61

Richard C. Bump, M.D.

Multichannel Urodynamic	
Equipment	62
Philosophy of Multichannel	
Urodynamics.....	62
Questions to Be Answered by	
Multichannel Urodynamics.....	63
Multichannel Urodynamic	
Assessment of the Filling Phase....	63
Multichannel Urodynamic	
Assessment of the Emptying	
Phase.....	71

7. Anal Manometry..... 74

Lee E. Smith, M.D.

Indication.....	74
Manometric Systems.....	74
Technique of the Examination.....	77
Interpretation	77
Abnormal Manometry.....	79

8. Fluoroscopic Evaluation of the Pelvic Floor..... 81

Claire Smith, M.D., Linda T. Brubaker, M.D., and Theodore J. Saclarides, M.D.

Diagnostic Methods of Evaluation....	81
Dynamic Fluoroscopy.....	82
Fluoroscopic Findings	83
Clinical Experience.....	87

9. Assessing Colonic Motility and Colon Transit..... 89

Amanda M. Metcalf, M.D.

Indications	89
Technique	90
Interpretation of Abdominal Films ...	90
Calculations	91
Interpretation of Results.....	91

SECTION FOUR. DISORDERS OF PAIR

14. Lower Urinary Tract Pain 127

Tamara G. Bavendam, M.D.

Lower Urinary Tract Function	128
------------------------------------	-----

UNCTS..... 59

10. Endoluminal Ultrasonography of the Anal Sphincters 94

Jeffrey W. Milsom, M.D., and Tracy L. Hull, M.D.

Principles of Ultrasound 94

Performing the Anal Ultrasound

Examination..... 95

Indications 96

11. Electrodiagnostic Assessment: A Diagnostic Adjunct 100

J. Thomas Benson, M.D., and Linda T. Brubaker, M.D.

Electrodiagnostic Equipment 101

Nerve Conduction Studies 101

Needle Electromyography (EMG)..... 103

Testing of Sacral Reflexes..... 105

Somatosensory Evoked Potentials.... 106

Autonomic Studies 107

12. Cystourethroscopy..... 109

Alfred E. Bent, M.D., and Anne L.

Viselli, M.D.

History of Endoscopy..... 109

Indications 110

Cystourethroscopy: Gas vs. Fluid for Infusion 110

Cystourethroscopy: Flexible vs. Rigid Instrumentation 110

Urethroscopy 110

Cystoscopy..... 114

Operative Endoscopy 117

Intraoperative Endoscopy 118

Complications of Endoscopy 119

13. Physical Therapy Evaluation of the Pelvic Floor..... 121

Rhonda K. Kotarinos, M.S., P.T., and Dee E. Fenner, M.D.

History 121

Physical Examination 122

N..... 125

Pain: A Conceptual Overview..... 129

Causes of Lower Urinary Tract Pain.. 130

History 132

Physical Examination	133
Treatment	134
15. Benign Anorectal Conditions.....	139
Theodore J. Saclarides, M.D., and José M. Velasco, M.D.	
Pain Patterns	139
Patient Evaluation.....	140
Hemorrhoids	140

SECTION FIVE. DISORDERS OF FUNCTION

17. Etiology of Genuine Stress Incontinence.....	153
Peggy A. Norton, M.D.	
Epidemiology and Possible Disease Models	153
Possible Intrinsic or Underlying Factors	154
Possible Extrinsic or Environmental Factors	155
18. Nonsurgical Management of Urinary Incontinence.....	158
S. Renee Edwards, M.D., and Linda T. Brubaker, M.D.	
Environmental Interventions	159
Behavioral Interventions.....	160
Devices	161
Pharmacologic Interventions	162
19. Genuine Stress Incontinence: Traditional Surgical Management ..	165
W. Glenn Hurt, M.D.	
Goals of Surgical Management.....	166
Selection of Operative Procedure	166
Preoperative Care.....	167
Vaginal Procedures	167
Abdominal Procedures	170
Complications of Surgical Management	172
Results and Follow-up	173
20. Genuine Stress Incontinence: Innovative Surgical Approaches....	175
Geoffrey Cundiff, M.D., and Alfred E. Bent, M.D.	
Laparoscopic Retropubic Urethropexy	175

Abscesses	141
Fistulas	142
Anal Fissures	144
16. Levator Ani Syndrome	146
William Altringer, M.D., and Daniel J. Deziel, M.D.	
Levator Ani Syndrome	146
Proctalgia Fugax.....	149
SECTION	151
Approaches to Intrinsic Urethral Sphincter Deficiency.....	177
21. Urinary Tract Fistulas	182
Theodore J. Saclarides, M.D., and Dee E. Fenner, M.D.	
Colovesical Fistulas	182
Vesicovaginal Fistulas.....	184
22. Constipation: Etiology and Evaluation.....	188
Elisa H. Birnbaum, M.D.	
Etiology.....	188
Pathophysiology	189
Evaluation	190
23. Medical Management of Constipation.....	193
Sheldon Sloan, M.D.	
Classes of Laxatives.....	194
General Approach to the Patient with Constipation.....	197
Special Circumstances in Management of Constipation.....	198
24. Constipation: Results of Surgical Therapy	201
Tracy L. Hull, M.D., and Jeffrey W. Milsom, M.D.	
Colonic Inertia.....	202
Anorectal Outlet Obstruction.....	203
Adult Hirschsprung's Disease	204
25. Fecal Incontinence: Etiology and Evaluation.....	208
James W. Fleshman, M.D.	
Definition	208

Etiology.....	208
Evaluation	210
26. Fecal Incontinence: Nonsurgical Therapy	214
Jeannette Tries, M.S., O.T.R., and Eugene Eisman, Ph.D.	
Theoretic Background	214
Development of Biofeedback for Incontinence	215
Rectal Sensation: An Essential Factor in Continence	215
Strengthening the External Anal Sphincter and Pelvic Floor Muscles	216
Confounding Factors in the Literature	216
Summary of Reported Findings and Clinical Observations	217
Biofeedback Treatment Goals for Fecal Incontinence.....	218
27. Fecal Incontinence: Surgical Therapy	220
Steven D. Wexner, M.D., and Stephanie L. Schmitt, M.D.	
Preoperative Assessment	220
 SECTION SIX. DISORDERS OF SUPPORT	
31. Posterior Vaginal Support Defects	255
Linda T. Brubaker, M.D., Dee E. Fenner, M.D., and Theodore J. Saclarides, M.D.	
Rectocele	255
Enterocoele	259
32. Vaginal Vault Prolapse	262
M. Chrystie Timmons, M.D., and W. Allen Addison, M.D.	
Etiology.....	262
Diagnosis	263
Management.....	264
33. Cystocele	269
Anita Pillai-Allen, M.D., and J. Thomas Benson, M.D.	
Definition	269

Isolated Sphincter Defects	221
Idiopathic-Neurogenic Fecal Incontinence	223
Neosphincter Procedures.....	225
Colostomy.....	226
28. Rectovaginal Fistula	229
Anthony Senagore, M.D., M.S.	
Classification	229
Etiology.....	229
Clinical Evaluation	230
Surgical Management	230
29. The Role of Physiotherapy	240
Rhonda Kotarinos, M.S.P.T., and Linda T. Brubaker, M.D.	
Correction of Posture.....	240
Rehabilitation of the Pelvic Floor.....	241
30. Perineal Skin Care for the Bedridden Patient with Incontinence.....	247
Ruth C. McMyn, R.N., M.S., C.E.T.N.	
Costs of Incontinence.....	247
Etiology of Skin Irritation Related to Incontinence	248
Management Techniques	248
Community Resources	251
ORT	253
Diagnosis and Grading.....	271
Nonsurgical Management.....	271
Surgical Management	271
34. Use and Care of the Pessary.....	278
Linda T. Brubaker, M.D., and Michael Heit, M.D.	
Prerequisites for Pessary Placement.....	278
Fitting.....	279
Pessary Options: Types of Pessaries	279
Discussions After Fitting.....	281
Follow-up.....	281
Diagnostic Use of the Pessary	282
35. Preprolapse Syndromes	283
José M. Dominguez, M.D., and Theodore J. Saclarides, M.D.	
Solitary Rectal Ulcer Syndrome.....	283

Colitis Cystica Profunda	285
Descending Perineum Syndrome	286
36. Rectal Prolapse	289
Steven J. Stryker, M.D.	
Etiology.....	289

SECTION SEVEN. FUTURE CONSIDERATIONS

37. The Frontiers of Female Pelvic Floor Disorders.....	299
Linda T. Brubaker, M.D., and Theodore J. Saclarides, M.D.	
Index.....	

Clinical Features and Evaluation	290
Treatment	291
Functional Abnormalities Persisting After Prolapse Repair.....	295

ATIONS, RESEARCH	297
-------------------------------	------------

.....	301
-------	------------