## Index

Page numbers in *italic* refer to figures. Page numbers in **bold** refer to tables.

<table>
<thead>
<tr>
<th>Term</th>
<th>Page Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>abdomen examination</td>
<td>223</td>
</tr>
<tr>
<td>radiography</td>
<td>126</td>
</tr>
<tr>
<td>wall muscles, awareness</td>
<td>135</td>
</tr>
<tr>
<td>abo-BoNT-A, 190, 192–193, <strong>197, 294</strong></td>
<td></td>
</tr>
<tr>
<td>antibodies</td>
<td>198</td>
</tr>
<tr>
<td>acetylcholine botulinum toxin and</td>
<td>191</td>
</tr>
<tr>
<td>colorectal motility</td>
<td>17</td>
</tr>
<tr>
<td>lower urinary tract, afferent sensation</td>
<td>5</td>
</tr>
<tr>
<td>receptors see muscarinic acetylcholine receptors Achenbach questionnaires</td>
<td>251</td>
</tr>
<tr>
<td>acontractile detrusor, intravesical electrical nerve stimulation</td>
<td>284</td>
</tr>
<tr>
<td>active bowel management, bowel/bladder dysfunction</td>
<td>136–137</td>
</tr>
<tr>
<td>acupuncture</td>
<td>235</td>
</tr>
<tr>
<td>A-delta fibers</td>
<td>5</td>
</tr>
<tr>
<td>adenyl triphosphate, muscarinic receptors on</td>
<td>264</td>
</tr>
<tr>
<td>adolescence, spinal dysraphism</td>
<td>260</td>
</tr>
<tr>
<td>adults fecal incontinence, quality of life</td>
<td>63</td>
</tr>
<tr>
<td>psychiatric comorbidities</td>
<td>74</td>
</tr>
<tr>
<td>adverse effects see side effects afferent mechanisms</td>
<td>5–7</td>
</tr>
<tr>
<td>botulinum toxin on</td>
<td>191</td>
</tr>
<tr>
<td>homeostatic, 23</td>
<td></td>
</tr>
<tr>
<td>stimulation</td>
<td>282</td>
</tr>
<tr>
<td>age botulinum toxin</td>
<td>198</td>
</tr>
<tr>
<td>daytime urinary incontinence vs</td>
<td>49–52</td>
</tr>
<tr>
<td>fecal incontinence vs</td>
<td>53</td>
</tr>
<tr>
<td>for IVES</td>
<td>285</td>
</tr>
<tr>
<td>nocturnal enuresis vs</td>
<td>47</td>
</tr>
<tr>
<td>psychological treatment</td>
<td>202</td>
</tr>
<tr>
<td>alarms, enuresis, 231–232, 238, 248</td>
<td></td>
</tr>
<tr>
<td>alarm signs, defecation disorders</td>
<td><strong>123</strong></td>
</tr>
<tr>
<td>alfaxosin</td>
<td>155, 269</td>
</tr>
<tr>
<td>algorithms urinary frequency</td>
<td>158</td>
</tr>
<tr>
<td>urinary incontinence</td>
<td>159</td>
</tr>
<tr>
<td>allergies cow’s milk, constipation</td>
<td>126</td>
</tr>
<tr>
<td>latex</td>
<td>302</td>
</tr>
<tr>
<td>α adrenergic antagonists</td>
<td>8, 155, 156–157, 269</td>
</tr>
<tr>
<td>α adrenergic antagonists</td>
<td>155, 156–157, 269</td>
</tr>
<tr>
<td>ω-adrenergic receptors</td>
<td>8, 264</td>
</tr>
<tr>
<td>ALSAC study daytime urinary incontinence</td>
<td>52</td>
</tr>
<tr>
<td>fecal incontinence</td>
<td>53</td>
</tr>
<tr>
<td>ambulatory urodynamics</td>
<td>95</td>
</tr>
<tr>
<td>amitriptyline</td>
<td>157</td>
</tr>
<tr>
<td>amygdala, inhibited temperament</td>
<td>84–85</td>
</tr>
<tr>
<td>anal canal</td>
<td>17</td>
</tr>
<tr>
<td>anal plugs, myo-biofeedback</td>
<td>148</td>
</tr>
<tr>
<td>anal sphincters</td>
<td>17</td>
</tr>
<tr>
<td>laxity, enemas</td>
<td>274</td>
</tr>
<tr>
<td>nerve supply</td>
<td>18</td>
</tr>
<tr>
<td>pinprick test</td>
<td>258–259</td>
</tr>
<tr>
<td>anatomy functional, large intestine</td>
<td>15–17</td>
</tr>
<tr>
<td>lower urinary tract</td>
<td>3–5</td>
</tr>
<tr>
<td>animated biofeedback</td>
<td>149</td>
</tr>
<tr>
<td>ano rectal anomalies, fecal incontinence</td>
<td>125</td>
</tr>
<tr>
<td>ano rectal manometry</td>
<td>128</td>
</tr>
<tr>
<td>Hirschsprung’s disease</td>
<td>127</td>
</tr>
<tr>
<td>antegrade continence enemas, 274–279, 310–312, see also Malone Antegrade Continence Enema anterior cingulate cortex</td>
<td>8, 24–27, 31</td>
</tr>
<tr>
<td>anterior midcingulate cortex</td>
<td>26–27</td>
</tr>
<tr>
<td>dorsal</td>
<td>79, 80–81, 82</td>
</tr>
<tr>
<td>anterior thalamic radiation</td>
<td>29</td>
</tr>
<tr>
<td>antibodies, botulinum toxin</td>
<td>198</td>
</tr>
<tr>
<td>anticholinergic agents, 8, 9, 234–235</td>
<td></td>
</tr>
<tr>
<td>neurogenic bladder</td>
<td>259</td>
</tr>
<tr>
<td>overactive bladder</td>
<td>154–155, 265–268</td>
</tr>
<tr>
<td>for urodynamics</td>
<td>93</td>
</tr>
<tr>
<td>antidepressants</td>
<td>9, 157–160, 234</td>
</tr>
<tr>
<td>antidiuretic therapy</td>
<td>209, 210</td>
</tr>
<tr>
<td>errors</td>
<td>225</td>
</tr>
<tr>
<td>polydipsia and</td>
<td>223</td>
</tr>
<tr>
<td>anus see also ano rectal manometry: entries beginning anal... anomalies</td>
<td>125</td>
</tr>
<tr>
<td>functional anatomy</td>
<td>17</td>
</tr>
</tbody>
</table>
anxiety disorders, 68
  cortical thinning, 75–77
  inhibited temperament, 84
anxiety relief, for urodynamics, 92–93
appendicececostomy, in situ, 274–275
appendix, antegrade continence enemas via, 310
arousability
  desmopressin and, 232
  nocturnal enuresis, 208, 214–215, 228
artifacts, uroflowmetry, 100
  artificial urinary sphincters, 306
athletes, stress incontinence, 111
atomoxetine, 82
ATP, lower urinary tract, 9
afferent sensation, 5
atropine, botulinum toxin and, 191
attention-deficit/hyperactivity disorder (ADHD), 68, 73, 246
  functional brain imaging, 80–83
Auerbach’s plexus, large intestine, 16, 17
augmentation cystoplasty see augmentation under bladder
Australia, nocturnal enuresis prevalence, 41
autism spectrum disorder, 246–247
autoaugmentation, bladder, 302–303
  contraindications, 302
  incisions, 303–304
  capacity, 95
  expected, 94
  nocturnal enuresis, 212–214
  optimum, 100–101
compliance, 95
  IVES results, 284
  distension volume for BTX injection, 295–296
  outlet obstruction, 96–97
  outlet resistance, creating, 304–306
  storage function (reservoir function), 95
  nocturnal, 212–214
  surgery to improve, 301–306
  wall thickness, 104
bladder/bowel dysfunction see bowel/bladder dysfunction
  bladder diaries, 223
bladder neck
  hypertrophy, botulinum toxin therapy and, 194
  surgery, 305
bladder training, 204
blood pressure, nocturnal, 211–212
bottle and glass analogy, 229
botulinum toxin (BTX; BoNT), 189–200, 293–297, 302
  age, 198
  antibodies, 198
  dosages, 197, 294, 296
  duration of effects, 194–195, 294
  external urethral sphincter, 9
  discoordination, 160
  injection technique, 195–196, 295–296
  mechanism of action, 6, 9
  number of injections, 195, 294
  overactive bladder, 156, 192
  subtypes, 190
bowel/bladder dysfunction, 89, 112, see also neuropathic bowel disease
treatment, 131–132
  physiotherapy, 139–143
  psychological, 201–205
  sacral nerve stimulation therapy, 175–181
bowel function, voiding dysfunction, 115–118
bowel preparation, in situ appendicocecostomy, 274
bowel therapy, bowel/bladder dysfunction, 136–137
brain
  anomalies, 323
  defecation, 19
  functional imaging, 21–34, 78, 80–83
  neuropsychiatric disorders, 75–85
  stimulation, depression, 78
  tumors, 323
Brazil, nocturnal enuresis prevalence, 44
breastfeeding
  defecation, 121–122
  infrequent bowel movements, 164
Bristol Stool Form Scale, 116, 117
bulking agents
  appendiceal openings, 311
  bladder neck, 305
bullying, fecal incontinence, 63
calcium, muscarinic receptors on release, 264
  calcium-restricted diet, 237
calibration, uroflowmetry, 99
-calretinin, 127
-cardiac toxicity, tricyclic antidepressants, 157
caregivers, nocturnal enuresis, 228
-catheterizable channels, 304, see also Monti channel
-catheterization
  -antegrade continence enemas, 311
  -rectum, 94
  -urinary, 93–94, see also clean intermittent catheterization
-catheterization overnight, 300
caudal regression syndrome, 319, 320
-cecal flap MACE, 276, 312
ceoncoplication, 275
-extracorporeal, 277
c-cecostomy, 277–278, 312–313
-central nervous system, 21–34
  -brain anomalies, 323
  -control of defecation, 19
  -efferent mechanisms, 9–11
  -neuropsychiatric disorders, 75–85
  -nocturnal enuresis, 208
cerebral cortex, 7, see also specific areas
  -thinning, 75–80
cerebral palsy, 323
cerebrospinal fluid shunting, 323
-in utero repair of myelomeningocele, 319
-C-fibers, 5
-Chair Percutaneous Cecostomy Catheter®, 277–278
c-channels, catheterizable, 304, see also Monti channel
c-charts, voiding and drinking, 145–146
-Chiari malformation, in utero repair of myelomeningocele, 319
-child Behavior Checklist, 251
-China, nocturnal enuresis prevalence, 48
-chiropractic, 235
c-chromosomal studies, nocturnal enuresis, 215, 216
-cingulate cortex
  -anterior, 8, 24–27, 31
  -attention-deficit/hyperactivity disorder, 80
-cingulofrontal–parietal (CFP) cognitive/attention network, 79, 80, 82
-circadian rhythm
drugs affecting, 237
-molecular biology, 212, 214
-nocturnal enuresis and, 209, 210–211, 212, 231, 237
-clamshell incision, bladder, 303–304
c-classification
  -fecal incontinence, 121, 201
  -voiding dysfunction, 108–115
c-clean intermittent catheterization (CIC), 136
  -expected bladder capacity, 94
  -neonates, 301
  -neurogenic bladder, 259, 281
c-clock genes, 212
-Clostridium botulinum, 190
cognitive behavioral therapy, 203, 235, 248
  -complex training programs, 204
cognitive effects, anticholinergic agents and, 265
cognitive therapy, bowel/bladder dysfunction, 135
-collegen, bladder wall, 3
-colon
  -afferents on urinary continence, 6
  -for augmentation cystoplasty, 302, 303
  -diversions, 313–314
  -functional anatomy, 15–17
  -manometry, 128–129, 312
  -massive dilation, 314, 315–316
  -resection, 315–316
  -transit time, 126–127
colostomy, 314
c-comorbidity
  -nocturnal enuresis, 237
  -psychiatric disorders as, 67–72, 246–251
c-compliance (of bladder), 95
-IVES results, 284
c-compliance (with treatment)
  -adolescence, 260
  -antegrade continence enemas, 311
  -bladder diaries, 223
  -desmopressin, 233–234
  -enuresis alarms, 232
  -refractory MNE, 236
-c-conduits, for antegrade continence enemas, 311–312
c-connexin 43, 214
-c-constipation (fecal retention)
c-causes, 124
c-definitions, 39, 122
c-evaluation, 121–130
  -neuropathic bowel disease, 273–280
  -physical examination, 223
-c-prevalence, 55, 163
  -fiscal incontinence vs, 53
-c-treatment, 163–169
  -errors, 167
  -maintenance therapy, 165–167
  -outcome, 167–168
  -psychological, 166, 202, 203
  -surgery, 309–316
  -TENS, 186
-c-urinary tract infections, 116
  -voiding dysfunction, 115–118
  -nocturnal enuresis, 116, 125, 214, 222, 237
  -overactive bladder, 112
  -urinary incontinence, 6, 116, 125
-c-continence, development of, 11
-c-continence enemas
  -antegrade, 274–279, 310–312, see also Malone Antegrade Continence Enema
-c-continencty physiotherapy see physiotherapy
-c-contraction (voluntary), pelvic floor muscles, 146–147, 148
-c-contractions
  -bladder, 5–6
  -colorectal, 18
  -HAPC, 312
-c-contrast enemas, 127
-c-cortex (cerebral), 7, see also specific areas
  -thinning, 75–80
-c-counseling, 202
c-cow’s milk allergy, constipation, 126
-c-CP/CPPS brain mapping, anterior cingulate cortex, 26, 27
crosstalk, bowel/bladder, 118

cultures, nocturnal enuresis prevalence, 48
cyclic AMP, muscarinic receptors on, 264
cystometrograms, 93
nocturnal enuresis, 213
cystoplasty see augmentation under bladder
cystoscopes, botulinum toxin injection, 296
cysts
brain, 323
spinal cord, 323–324
cytochrome oxidase enzymes
on mirabegron, 268
on tolterodine, 267
daytime urinary frequency syndrome, 110
daytime urinary incontinence, see also voiding dysfunction
definitions, 38, 201
epidemiology, 49–53, 56
psychiatric comorbidities, 69
psychological treatment, 202, 203–204
TENS on, 185
deep brain stimulation, depression, 78
defecation
 disorders see constipation; fecal incontinence
frequency, 15, 121–122
mechanism, 18–19
neurophysiology, 15–20
retraining, 141
defecation diaries, 92
defecography, 127–128
demystification, 202, 229
depression, 68, 83
brain stimulation, 78
cortical thinning, 75–77, 79
dermal sinus, spinal, 318
desethyl oxybutynin, 155, 266
desipramine, toxicity, 157
desmopressin, 209, 210, 231, 232–234, 238
centration tests, 237
dosages, 233, 236
errors, 225
polydipsia and, 223
refractory MNE, 235–236
refractory nocturnal polyuria, 236–237
detrusor, 3
botulinum toxin on, 191, 197, 294
pressure measurement, 93
underactivity, see also underactive bladder
neuromodulation, 282, 284
voiding pressures, 11
detrusor overactivity (DO)
anteior cingulate cortex, 8
botulinum toxin on, 192, 294
inhibition, 7
neuromodulation, 282
nocturnal enuresis, 213
signs, 223
white matter abnormalities, 83
detrusor sphincter dyssynergia (DSD), 113, 114, 257
botulinum toxin, 190–191, 295
electromyography, 261
development of continence, 11
diabetes insipidus, 236
diabetes mellitus, 223
Diagnostic and Statistical Manual definitions
autism spectrum disorder, 246
daytime urinary incontinence, 38
encopresis, 39, 201
nocturnal enuresis, 38
diet
calciium-restricted, 237
for constipation, 163, 164, 165
drinks, 146
dilution, botulinum toxin, 195, 295
dipstick tests, urine, 223
discoordination
external urethral sphincter, botulinum toxin, 160
internal urethral sphincter, α1 adrenergic
agonists, 156–157
disimpaction, fecal, 165
distrations, for urodynamics, 92
diversions, colon, 313–314
diverticula, bladder autoaugmentation, 303
DMSA scan, neurogenic bladder, 261
dopamine, colorectal motility, 17
dopamine D4 receptor gene, 82
dopamine transporter gene
(SLC6A3), 81
dorsal anterior midcingulate cortex, 79, 80–81, 82
dorsal rhizotomy, selective, 322, 323
dorsolateral prefrontal cortex, 79, 80, 81, 82
doxazosin, 269
drains, ureters, 302
DRD4 (dopamine D4 receptor) gene, 82
drinking charts, 145–146
Dualpex Uro 961, 185
dual-PVR nomograms, 104
dual-Qmax nomogram, 101, 102
duloxetine, 10, 159–160
dyschezia, infants, 164
dysfunctional elimination syndrome see bowel/bladder dysfunction
dysfunctional voiding (DV), 113, 201, see also voiding dysfunction
biofeedback, 145–151, 204
botulinum toxin, 193–194
nocturnal enuresis and, 214
peripheral tibial nerve stimulation for, 173
psychological treatment, 204
education, see also psychoeducation
bowlbladder dysfunction, 141, 142
definitions, 116, 125
demystification, 202, 229
depression, 68, 83
deep brain stimulation, depression, 78
defecation disorders see constipation; fecal incontinence
defunctional elimination syndrome see bowel/bladder dysfunction
defunctional voiding (DV), 113, 201, see also voiding dysfunction
biofeedback, 145–151, 204
botulinum toxin, 193–194
nocturnal enuresis and, 214
peripheral tibial nerve stimulation for, 173
psychological treatment, 204
education, see also psychoeducation
bowlbladder dysfunction, 141, 142
definitions, 116, 125
demystification, 202, 229
depression, 68, 83
deep brain stimulation, depression, 78
defecation disorders see constipation; fecal incontinence
defunctional elimination syndrome see bowel/bladder dysfunction
defunctional voiding (DV), 113, 201, see also voiding dysfunction
biofeedback, 145–151, 204
botulinum toxin, 193–194
nocturnal enuresis and, 214
peripheral tibial nerve stimulation for, 173
psychological treatment, 204
education, see also psychoeducation
bowlbladder dysfunction, 141, 142
definitions, 116, 125
demystification, 202, 229
depression, 68, 83
deep brain stimulation, depression, 78
defecation disorders see constipation; fecal incontinence
defunctional elimination syndrome see bowel/bladder dysfunction
defunctional voiding (DV), 113, 201, see also voiding dysfunction
biofeedback, 145–151, 204
botulinum toxin, 193–194
nocturnal enuresis and, 214
peripheral tibial nerve stimulation for, 173
psychological treatment, 204
education, see also psychoeducation
electric current see neuromodulation
electrode programming, InterStim II® device, 179
electrodes
  myo-biofeed back, 148
parasacral, 184
urodynamics, 94
electromyography (EMG), 94
detrusor sphincter dyssynergia, 261
lag time, 156–157
myo-biofeed back, 148
uroflowmetry, 103
emotional effects, fecal incontinence, 63
encopresis
definitions, 39, 201
psychiatric comorbidities, 69
endoscopic cecostomy, percutaneous, 312–313
endoscopic sphincter injection, botulinum toxin, 193, 194
enemas, see also contrast enemas
  Malone Antegrade Continence Enema
  constipation with fecal incontinence, 166
  fecal impaction, 165
  lax anal sphincter, 274
  for MACE, 278
  for urodynamics, 93
enteric nervous system, 17–19
enteroception, 23
enterocystoplasty see augmentation under bladder enuresis see daytime urinary incontinence;
  nocturnal enuresis
enuresis alarms, 231–232, 238, 248
epidemiology
  bowel/bladder dysfunction, 35–60
defecation disorders, 122
erythema, transdermal patches, 155
ethnicity, nocturnal enuresis prevalence, 48
evidence, nocturnal enuresis, 227
examination see physical examination
expected bladder capacity, urodynamics, 94
externalizing psychiatric disorders, 68
external urethral sphincter (EUS), 4-5, 9
  electromyography, 94
extracorporeal cecoplication, 277
extrinsic nervous system, colorectal, 17–18
facial expression, Ochoa syndrome, 114
family factors, see also genetics
  depression, 79
  nocturnal enuresis, 49, 215
  urinary incontinence, 74
fascial slings, 305
fatty infiltration, filum terminale, 318
fecal impaction, 165
fecal incontinence
treatment, 163–169
  psychological, 202, 203
  surgical, 309–316
fetal myelomeningocele repair, 319
voiding, 11
fiber, diet, 165
filling
  for BTX therapy, 295–296
urodynamics, 94
filum terminale, see also tight filum syndrome
  fatty infiltration, 318
section, 320
fitness, 141
5-HT see serotonin
5-HT, antagonists, irritable bowel syndrome, 19
5-HT4 agonists, 19
5-hydroxymethyltolterodine, 267
flow curve patterns, uroflowmetry, 96
flowmetry see uroflowmetry
flow time, uroflowmetry, 100
fluid intake, 230, see also hydration
  charts, 145–146
  desmopressin and, 233
  refractory MNE, 236
  standardized, 235
fluoroscopy, urodynamics, 95
Foley catheters, 300
follow-up, constipation, 166
food intake see nutritional intake
foot flexibility, stress incontinence, 111
foramen needles, placement, 177
formulations
  anticholinergic agents, 265–266
  botulinum toxin, 190
  desmopressin, 232, 236
Fowler's syndrome, 6
frequency
  nocturnal enuresis, 48
  voiding, see also overactive bladder
daytime urinary frequency syndrome, 110
frequency (electric current), 183
frontal grey matter decreases, 75
frontal lobe, damage, 78–80
frontostriatal connections, ADHD, 82
functional anatomy, large intestine, 15–17
functional bladder outlet obstruction, 96
functional brain imaging, 21–34, 78, 80–83
functional magnetic resonance imaging, 22, 208
functional nonretentive fecal incontinence (FNRFI), 53
colonic transit time, 126–127
presentation, 125
treatment, 168–169
GABA agonists, 9
gastrocystoplasty, 303
gender
daytime urinary incontinence, 52
ileal incontinence vs, 53
hypogastric nerve, 8
nocturnal enuresis vs, 48
voiding pressures, 96
genetics, 74, see also family factors
nocturnal enuresis, 215–216
Gert’s nucleus, 6
giggle incontinence, 110–111
glomerular filtration rate, nocturnal, 210
glucose, urine, 223
glutamate, 9–10
glutamate agonists, 10
glycerin, enemas for MACE, 278
Golytely®, for MACE, 278
granulation tissue, cecostomy, 313
guidelines, nocturnal enuresis, 229
heart, toxicity, tricyclic antidepressants, 157
heparanase gene, 114
high amplitude propagating contractions (HAPC), 18, 312
high amplitude \(Q_{\text{max}}\), 101–102
Hinman syndrome, 114
Hirschsprung’s disease, diagnostic tests, 127
histamine, colorectal motility, 17
histology, large intestine, 16–17
historical aspects, botulinum toxin, 189–191
history-taking
defecation disorders, 123–125
nocturnal enuresis, 221, 222, 225
refractory, 235
psychological problems, 247
urodynamics, 91, 92
voiding dysfunction, 107–108
Hjalmas equation, 94
homeostatic afferents, 23
Hong Kong, nocturnal enuresis prevalence, 48
hormones, nocturnal enuresis, 210–211
hydration, see also voiding and drinking charts
for uroflowmetry, 99
in urotherapy, 134
hydrocephalus, 323
hydronephrosis, 300
augmentation cystoplasty, 303
botulinum toxin on, 193
neurogenic bladder, 259
hypertension, 237
hypertonic phosphate enemas, 165
hypnosis, 235
hypogastric nerve, 5, 6, 8
hyponautraemia, desmopressin and, 233
ICCS see International Children’s Continence Society
ICD-10 definitions
daytime urinary incontinence, 38
encopresis, 39, 201
nocturnal enuresis, 38
iceberg phenomenon, 116, 117
ileostomy, 140, 313–314
ileum, for augmentation cystoplasty, 302, 303
imbrication, appendix, 310
imipramine, 9, 157, 234
impaction, fecal, 165
implantation, InterStim II® device, 177–179
inattentiveness, social, 79
incisions, bladder augmentation, 303–304
incobotulinumtoxinA, 294
individualization, intravesical electrical nerve stimulation, 283
infantilization, 64–65
infants
constipation, treatment, 163–164
transient urodynamic dysfunction, 113
inhibition patterns, nocturnal enuresis, 215
inhibited temperament, 84
injection technique, botulinum toxin, 195–196, 295–296
in situ appendicocecostomy, 274–275
insula, 23–24, 25, 31
intellectual disability, 247
intermittent catheterization, see also clean intermittent catheterization
antegrade continence enemas, 311
internalizing psychiatric disorders, 68
intervesical electrical nerve stimulation, 282–286
intersitiate instillation anticholinergic agents, 266
botulinum toxin, 196
intravesical instillation
anticholinergic agents, 266
botulinum toxin, 196
intrinsic nervous system, colorectal, 17
irritable bowel syndrome (IBS)
anterior cingulate cortex, 24–26
stress response, 19
urinary incontinence, 74
Italy, nocturnal enuresis prevalence, 44
kidney see renal factors
Korea, daytime urinary incontinence, prevalence, 49
laboratory investigations
defecation disorders, 126
nocturnal enuresis, 223–224
lactulose, 164, 166
lag time, electromyography, 156–157
lamina propria, large intestine, 16
laparoscopy
Index

333

cecostomy, 312–313
in situ appendicoccecostomy, 275, 276–277
lateral prefrontal cortex, 25, 31, 81–83
latex allergy, 302
laxatives, 164, 165, 203
behavior modification with, 168
LD₅₀ (median lethal dose), 190
leakage, appendiceal openings, 311
left colon MACE procedure, 277, 312
lidocaine, urodynamics, 93
limbic system, 24
linkage studies, nocturnal enuresis, 215, 216
lipoma, spinal cord, 318, 320
lipomyelomeningocele, 320–321
locus coeruleus, 213
longitudinal studies, see also ALSPAC study
nocturnal enuresis, 44–47, 56
long-term cure rates, desmopressin, 234
lower urinary tract symptoms (LUTS)
peripheral tibial nerve stimulation, 172–173
psychiatric disorders, 73–74
lumbosacral area, physical examination, 125, 258
lyophilisate, desmopressin, 232, 233, 236
Macroplastique, 305
magnetic resonance imaging
defecation disorders, 128
functional, 22, 208
neurogenic bladder, 258, 261
sacral nerve stimulation therapy and, 287
major voiding dysfunction disorders, 110, 113–114
Malone Antegrade Continence Enema, 274–279
outcomes, 278–279
mammalian clock genes, 212
manometry
anorectal, 128
Hirschsprung’s disease, 127
colon, 128–129, 312
meals see nutritional intake
median lethal dose, 190
median prefrontal cortex, 8, 31
megarectum/megasigmoid, 315–316
Meissner’s plexus, large intestine, 16, 17
Melt formulation, desmopressin, 232, 233, 236
mesentery, augmentation cystoplasty and, 303
methylphenidate, giggle incontinence, 111
microsatellite markers, nocturnal enuresis, 215
micturition see voiding
milk, 126, 163
milk of magnesia, 164, 166
mineral oil, 165, 166
enemas for MACE, 278
for fecal impaction, 165
minimally acceptable Qᵤᵤᵤᵤ, 101
minor voiding dysfunction disorders, 110–112
mirabegron, 156, 268
Mitchell modification, Young–Dees–Leadbetter procedure, 305
moderate voiding dysfunction disorders, 110, 112–113
molecular biology, circadian rhythm, 212, 214
MOMS trial, in utero repair of myelomeningocele, 319
monosymptomatic nocturnal enuresis (MNE), 38, 112
management, 227–244
antidepressants, 234
antimuscarinics, 234–235
desmopressin, 232–234
TENS, 186
non-monosymptomatic nocturnal enuresis vs, 48, 227
psychological problems, 245
psychiatric comorbidities, 69
refractory, 235–236
TENS, 186
Monti channel, 276
obliteration, 279
motility, colorectal, 17–19
high amplitude propagating contractions, 18, 312
motor training, urotherapy, 136
mucosa, large intestine, 16
muscari nic acetylcholine receptors, 5, 8–9, 264
antagonists, 8, 9, 234–235, see also anticholinergic agents
neurogenic bladder, 259
overactive bladder, 154–155, 265–268
muscle awareness, pelvic floor, 135, 146–147
muscle weakness, botulinum toxin, 196
muscularis mucosae, large intestine, 16
myelodysplasia, Hjalmas equation, 94
myelomeningocele, 64–65, see also spinal dysraphism
focal incontinence, 125
intravesical electrical nerve stimulation, 283, 284
neurogenic bladder, assessment, 257, 259
TENS, 286
myenteric plexus, large intestine, 16, 17
myo-biofeedback, 148
myogenic detrusor failure, 114–115
natural fill cystometry, 95
needles, botulinum toxin injection, 296
neoappendicostomy, 312
neoappendix, MACE, 276
neonates
bladder function, 11
clean intermittent catheterization, 301
neurogenic bladder, 258–259
nerve growth factor, botulinum toxin on, 295
nerve growth factor, botulinum toxin on, 295
nerve transfer techniques, 322
Netherlands, nocturnal enuresis prevalence, 41
neurogenic bladder assessment, 257–262
blockade of contractility, 9
botulinum toxin on, 294
management, 263–271
neuromodulation, 281–291
surgery, 281, 299–308
neurological, 317–326
neurogenic bladder and bowel dysfunction, 64–65
botulinum toxin, duration of effects, 194
peripheral tibial nerve stimulation, 172–173
sacral nerve stimulation therapy, 179–180
neurological surgery, neurogenic bladder, 317–326
neuromodulation, 6, 136, see also peripheral tibial nerve stimulation; sacral nerve stimulation therapy
neurogenic bladder, 281–291
neuropathic bowel disease, see also bowel/bladder dysfunction
treatment, 273–280
neurophysiology, 175–176
bowel/bladder crosstalk, 118
defecation, 15–20
neuropsychiatric disorders, 73–88, see also specific disorders
neurosurgery, neurogenic bladder, 317–326
neurotransmitters
botulinum toxin on release, 293
large intestine, 17
lower urinary tract, 264
nociception see pain
nocturia, 229
nocturnal enuresis, 207–208, see also monosymptomatic nocturnal enuresis
circadian rhythm and, 209, 210–211, 212, 231, 237
circumcision and, 116, 125, 214, 222, 237
daylight urinary incontinence vs prevalence, 49 definitions, 38
epidemiology, 40–49, 56
evaluation, 221–226
overactive bladder, 112
pathophysiology, 209–219
psychiatric comorbidities, 69
psychological treatment, 235, 248
sleep and, 214–215, 222, 230–231
TENS, 186
treatment failure, 225
treatment standards, 228
TENS, 186
notch, 229
nocturnal polyuria, 209–210, 223, 227
desmopressin, 234
desmopressin refractory, 236–237
nomograms
postvoid residual urine, 104
Qmax, 101, 102
non-monosymptomatic nocturnal enuresis (NMNE), 38, 207, 208
monosymptomatic nocturnal enuresis vs prevalence, 48, 227
psychological problems, 245
TENS, 186
nonretentive fecal incontinence see functional nonretentive fecal incontinence
nonsteroidal anti-inflammatory drugs, for bladder spasm, 9
norepinephrine (NE)
colorectal motility, 17
on lower urinary tract, 10
nurses, history-taking, 107
nutritional intake
refractory MNE, 236
on urine volume, 230
obesity, prefrontal cortex, 29
occult spinal dysraphism, 221–223, 257, 258, 259, 319
occult tethered cord syndrome, 321–322
Ochoa syndrome, 114
off-label medication, 189, 196
botulinum toxin, 294
ona-BoNT-A, 190, 192, 193, 197, 293–297
antibodies, 198
Onuf’s nucleus, 6
oppositional defiant disorder, 68
orthopedic surgery, botulinum toxin doses from, 197, 198
osmolality, desmopressin refractory nocturnal polyuria, 236–237
osmotic excretion, nocturnal, 210
overactive bladder (OAB), 112
botulinum toxin, 156, 192
fetal retention, 115
obesity and, 29
peripheral tibial nerve stimulation for, 171, 173
pharmacotherapy, 153–156, 265–269
prostaglandins for, 9
TENS, 183–188, 286
treatment algorithm, 158
overdistension, bladder, 101
overnight catheterization, 300
overprotection (infantilization), 64–65
oxybutynin, 154, 155, 265–266
TENS vs, 186
PACCT, definition of constipation, 39
pain
anterior cingulate cortex, 24
bladder, 3–4
bowel/bladder dysfunction, 140, 141
detethering of spinal cord on, 321
sacral nerve stimulation therapy, 288
supraspinal areas, 26–27
paralysis, urethral sphincters, 260
parasacral electrodes, 184
parasympathetic nervous system
colorectal function, 17–18
lower urinary tract, 5, 263
Parinaud’s syndrome, 323
Paris Consensus on Childhood Constipation
Terminology, definition of constipation, 39
peak flow rate (Qmax), 96, 100, 101
pelvic urethral approach, botulinum toxin therapy, 296
pelvic floor
contraction and relaxation, 148
inappropriate activation, 85, 259
muscle awareness, 135, 146–147
pelvic nerve, 5, 8
percutaneous ecostomy tube, 277–278
percutaneous endoscopic ecostomy, 312–313
perianal region, examination, 125
periaqueductal grey area (PAG), 6, 8, 23, 30–32, 175–176
perigenital reflex, rats, 11
peripheral tibial nerve stimulation (PTNS), 171–174, 287
TENS vs, 171, 185–186
pharmacokinetic/pharmacodynamic properties, desmopressin, 236
pharmacotherapy, 153–162
phasic contractions, colorectal, 18
phobias, 68
inhibited temperament, 84–85
phosphate enemas, 165
phosphodiesterase inhibitors, 160
phospholipases, muscarinic receptors on, 264
physical examination
defecation disorders, 125–126
lumbosacral area, 125, 258
nocturnal enuresis, 221–223
rectum, 125–126, 223, 225
urodynamics, 92
voiding dysfunction, 107
physiotherapy, bowel/bladder dysfunction, 139–143
specialists, 140
pinprick test, anal sphincter, 258–259
plateau-shaped curves, uroflow patterns, 101, 103
plication see ceplication
polydipsia, desmopressin and, 223
polyethylene glycol, 164, 165, 166
enemas for MACE, 278
for fecal impaction, 165
polyuria, nocturnal, 209–210, 223, 227
desmopressin, 234
desmopressin refractory, 236–237
pontine micturition center (PMC), 6, 22, 23, 30–32, 175–176, 264
positron emission tomography, 22
posterior tibial nerve, 172, 287
postganglionic neurons, 8
postural hypotension, α1 adrenergic antagonists, 155
posture
baroregulatory response, 211–212
postvoid dribbling, 111
urodynamics, 94
uroflowmetry, 99
voiding, 107, 136, 146
postvoid dribbling, 111, 146
postvoid residual urine (PVR)
botulinum toxin on, 193
urogenetic bladder, 259
reduction, 300
uroflowmetry, 96, 103, 104
prefrontal cortex, 27–29, 75
attention-deficit/hyperactivity disorder, 80, 81–83
inhibited temperament, 84–85
median, 8, 31
nocturnal enuresis, 213
premedication, for urodynamics, 93
pressure at residual volume, 93
pressure measurement, urodynamics, 93
primary enuresis, 38
secondary enuresis vs. 48
psychological problems, 245
programmable timer watches, 204
propagating contractions (HAPC), colorectal, 18, 312
prophylactic surgery, tethered spinal cord, 319–320, 324
propiverine, 267
proprioception, pelvic floor, 135, 146–147
prostaglandin E2, nocturnal excretion, 210
prostaglandins, 9
prostatitis, brain mapping, anterior cingulate cortex, 26, 27
protein load, food intake, 230
prucalopride, 19
pruritus, transdermal patches, 155
psychiatric assessment, 248
psychiatric disorders, see also neuropsychiatric disorders
comorbidity, 67–72, 246–251
psychoeducation, 202
psychological treatment
bowel/bladder dysfunction, 201–205
constipation, 166, 202, 203
nocturnal enuresis, 235, 248
puberty, spinal dysraphism, 260
puborectalis muscle, 17, 19
pudendal nerve, 9, 263–264
neuromodulation, 7
TENS, 286
punishment, 61–62
purinergic antagonists, 9
Qave, 96, 100
Qmax, 96, 100, 101
quadripolar lead, sacral nerve stimulation therapy, 177, 178
quality of life, 61–66
questionnaires
psychiatric comorbidities, 70–71, 247–248, 249–251
voiding dysfunction, 107, 109
radiography, abdomen, 126
radionuclide cystography, 95
rats, neonates, 11
rectal motor complexes, 18
rectoan inhibitory reflex, 18, 128
rectum, see also anorectal manometry
anomalies, fecal incontinence, 125
catheters, 94
distension, 115–118
examination, 125–126, 223, 225
functional anatomy, 16, 17
massive dilation, 315–316
pressure, myelomeningocele, 261
sonography, 224, 225
red flag signs, defecation disorders, 123
reflux see vesicoureteral reflex
reimplantation of ureters, 112
relapse
daytime urinary incontinence, 52
nocturnal enuresis, 47
relaxation, pelvic floor muscles, 146–147, 148
renal factors
nocturnal enuresis, 236–237
signs suggesting, 224
nocturnal polyuria, 210
renin–angiotensin–aldosterone system, 211
reservoir function of bladder, nocturnal, 212–214
residual urine see postvoid residual urine
resiniferatoxin, 5
retention see urinary retention
reversibility, botulinum toxin therapy, 194
rhizotomy, 322, 323
right frontal lobe damage, 78–80
Rome II definitions, constipation, 39
Rome III definitions
constipation, 39, 122
feecal incontinence, 39, 122, 201
sacral agenesis, 257–258, 324
sacral dysgenesis, 320
sacral nerve stimulation therapy, 175–181, 287–289
outcomes, 179–180
patient selection, 176–177
sacral neuromodulation, 6
sacral rhizotomy, 322, 323
saline, antegrade continence enemas, 311
sausages, botulinum toxin and, 189–190
schizophrenia, 74
scintigraphy, neurogenic bladder, 261
scoliosis, 319
screening, psychological problems, 70, 247–248
secondary enuresis, 38, 48, 69, 245
selective dorsal rhizotomy, 322, 323
selective serotonin reuptake inhibitors (SSRI), 159–160
self-esteem, 61, 67
senna, 166
separation anxiety disorder, 68
serosa, large intestine, 16
serotonin
colorectal motility, 17, 18–19
on lower urinary tract, 9, 10
sexuality, myelomeningocele, 64
Short Screening Instrument for Psychological Problems in Enuresis, 70, 249–250
shunts, myelomeningocele, 319
side effects
anticholinergic agents, 155, 265
botulinum toxin, 196–197, 198
tricyclic antidepressants, 157
sigmoid colon, massive dilation, 315–316
silent afferents, 5
single photon computerized tomography, 22
sitting, urodynamics, 94
skeletal muscle
electromyography, 94
external urethral sphincter, 5
function, 264
SLC6A3 (dopamine system dopamine transporter) gene, 81
sleep
desmopressin and, 232
nocturnal enuresis and, 214–215, 222, 230–231
slings, fascial, 305
slow waves, colorectal, 18
small bladder, 212–214, 227–228
smooth muscle, external urethral sphincter, 4–5
SNRIs, 159–160
soapsuds enemas, 165
social inattiveness, 79
social phobia, 68, 84–85
socioeconomic status, nocturnal enuresis prevalence, 49
sodium excretion, desmopressin and, 232
sodium load, 230
sodium picosulfate, 166
solifenacin, 267
somatostatin, colorectal motility, 17
sonograms see ultrasound
sorbitol, 164, 166
sphincters
anal, 17
lax, 274
tax supply, 18
pinprick test, 258–259
urethral, 4–5, see also detrusor sphincter
dyssynergia; external urethral sphincter;
internal urethral sphincter discoordination
artificial, 306
botulinum toxin, 193–194, 197
paralysis, 260
spina bifida see myelomeningocele
spinal cord, 6–7, 9–10, 323–324
delegation disorders, 128
tethered, 317–321, 324
occult, 321–322
recurrence, 321
spinal dysraphism, see also myelomeningocele;
tethered spinal cord
neurogenic bladder
assessment, 257–262
neuromodulation, 281–291
peripheral tibial nerve stimulation, 173
signs, 221–223, 259
sports, stress incontinence, 111
staccato uroflow patterns, 101, 103
staining, fecal, 53
staircase response, intravesical electrical nerve stimulation, 283
stenosis, appendiceal openings, 311
stents
MACE, 275
ureters, 302
stomas
ileostomy, 140, 313–314
MACE, stenosis, 279
storage function of bladder, 95
nocturnal, 212–214
surgery to improve, 301–306
Strengths and Difficulties Questionnaire, 71, 250
stress, central nervous system response, 19
stress incontinence, 111
duloxetine for, 10
stress response
nocturnal enuresis, prevalence, 49
prefrontal cortex, 29
striated muscle see skeletal muscle
subclinical psychological symptoms, 67, 246, 248
submucosa, large intestine, 16
suction biopsy, Hirschsprung’s disease, 127
Sudan, nocturnal enuresis prevalence, 41, 48
suppositories, before urodynamics, 93
suprachiasmatic nuclei, 212, 213
supraspinal areas, pain, 26–27
surface electrodes, myo-biofeedback, 148
surgery
constipation, 309–316
fecal incontinence, 309–316
neurogenic bladder, 281, 299–308
neurological, 317–326
neuropathic bowel disease, 274–279
for urethral sphincter paralysis, 260
suturing, cecostomy, 312
surgery
constipation, 309–316
fetal incontinence, 309–316
neurogenic bladder, 281, 299–308
neurological, 317–326
neuropathic bowel disease, 274–279
for urethral sphincter paralysis, 260
suturing, cecostomy, 312
sympathetic nervous system
anterior cingulate cortex, 24
colorectal function, 17–18
lower urinary tract, 5, 263
synaptosome-associated protein 25, 191
tablets, desmopressin, 232–233, 236
tamsulosin, 155, 269
tap water enemas, 165, 278
tegaserod, 118
terazosin, 155
tethered spinal cord, 317–321, 324
occult, 321–322
recurrence, 321
tibial nerve stimulation see peripheral tibial nerve stimulation
tight filum syndrome, 321–322
timer watches, 204
time to peak flow rate, 100
tined lead, sacral nerve stimulation therapy, 177, 178
toilet training, 203, 204
tolterodine, 266
cytochrome oxidase enzymes on, 267
tonic contractions, colorectal, 18
tower-shaped uroflow patterns, 101, 103
trajectory analysis, 53, 56
transcranial magnetic stimulation, depression, 78
transcutaneous electrical nerve stimulation (TENS), 183–188, 235, 286–287
peripheral tibial nerve stimulation vs, 171, 185–186
transdermal patches, anticholinergic agents, 155, 266
transient receptor potential vanilloid type 1 (TRPV1) receptors, 5
transient urodynamic dysfunction of infancy, 113
transit time, colon, 126–127
transperineal injection, botulinum toxin, 193
transperitoneal drains, 302
trends, nocturnal enuresis prevalence, 48–49
tricyclic antidepressants, 9, 157, 234
trigone, botulinum toxin and, 196
trospium HCl, 266–267
tumors
brain, 323
spinal cord, 323–324
tunica muscularis, large intestine, 16
Turkey, nocturnal enuresis prevalence, 44
twin studies, nocturnal enuresis, 215
ultrasound
nocturnal enuresis, 224
for physiotherapy, 140
rectum, 116, 127, 224, 225
spinal dysraphism, 258, 259, 260, 261
urodynamics, 92
umbrella cells, 3–4
underactive bladder, 113, see also underactivity under detrusor
uninhibited temperament, 84
United Kingdom, daytime urinary incontinence prevalence, 49
United States of America, nocturnal enuresis prevalence, 41–44
ureters
reflux see vesicoureteral reflux
reimplantation, 112
surgery, 302
urethral sphincters, 4–5, see also detrusor sphincter dyssynergia; external urethral sphincter artificial, 306
botulinum toxin, 193–194, 197
internal urethral sphincter discoordination, α1 adrenergic antagonists, 156–157
paralysis, 260
urethral valves, botulinum toxin therapy, 194
urge incontinence, 201, 203–204
urgency, botulinum toxin on, 191
urinary retention
botulinum toxin, 192–193
pharmacotherapy, 156
urinary tract infections
botulinum toxin on, 193
bowel/bladder dysfunction, 112
constipation, 116
nocturnal enuresis, 223–224
urodynamics, 260–261
urine, dipstick tests, 223
urodynamics (UDS), 91–97
neurogenic bladder, 258, 259–260
nocturnal enuresis, 213, 224, 225
timing, 96–97
urinary tract infections, 260–261
urofacial syndrome, 114
uroflowmetry, 96, 99–106, 214, 224
biofeedback, 148–149
interpretation, 100–104, 105
uroflow patterns, 100, 101–103
urothelium, 3–4
botulinum toxin injection, 195
urotherapy, 229–231, see also physiotherapy bowel/bladder dysfunction, 133–135
uterus, afferents on urinary continence, 6
vaginal voiding, 111, 146
Vancouver questionnaire, 107, 109
vanilloids, 5
vasopressin, 210–211
ventrolateral prefrontal cortex, 79, 80, 81–82
vertebral anomalies, 323–324
vesicocentrism, 1
vesicoureteral reflux
  IVES on, 285
  neurogenic bladder, 259
  surgery, 301
voiding dysfunction, 112, 113
video fluoroscopy, urodynamics, 95
violence, 61
voided volume, 100
voiding
  central nervous system, 21–34
  neurophysiology, 3–14, 264–265
  technique training, 136, 142, see also biofeedback
voiding pressures, 11
voiding and drinking charts, 145–146
voiding diaries, 92, 229
voiding dysfunction, see also dysfunctional voiding evaluation, 107–119
voiding intervals, standardization, 135
voiding postponement, 201
  psychological treatment, 204
  quality of life, 62
voiding pressures, 96
voiding time, 100
voxel based mapping (VBM), 75, 76

water
  enemas, 165, 278
  intoxication, 233
water column test, neurogenic bladder, 258
weaning from medication, constipation, 166
white matter, abnormalities, 83
Williams needle, 296
Xiao procedure, 322
X-linked diabetes insipidus, 236
X-rays see fluoroscopy; radiography
Young–Dees–Leadbetter procedure, Mitchell modification, 305