Abnormalities, Müllerian
detecting with ultrasound, 40
spontaneous abortion associated with, 118
Abortion, spontaneous
and age, 24
and gonadotropin-induced ovulation, 108
in ovarian induction, 199
Adhesions, intrauterine, outcomes of treatment of, 118–19
Age
and fertility, 24–38
and multifetal gestations, with assisted reproductive technology, 197
and prediction of pregnancy, and the clomiphene citrate challenge test, 29–30
and reproduction, 7–8, 161
Air compressor, medical, 73
Air delivery system
for an in vitro fertilization laboratory, 63–72
outside air delivery, 64–66
Airflow, directing, in the laboratory, 67
Air quality, in the laboratory, 76
Air volume, 67–68
American Board of Obstetrics and Gynecology, 61
American Registry of Diagnostic Medical Sonographers, 61
American Society of Anesthesiologists (ASA)
guidelines for nonoperating room anesthetizing locations, 91
on monitored anesthesia care, 78
on routine preoperative laboratory and diagnostic screening, 90
American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAF), specification for operating rooms, 63
Amoxicillin, prophylactic administration of, after surgery, 82
Ampicillin, prophylactic administration of, before surgery, 82
Analysis, of retrograde ejaculates, 156–57
Anatomy
defects leading to infertility, 3–5
findings from falloposcopy, 132–33
Andrology, laboratory design features, 72
Anejaculation, treating, 2–21
Anesthesia
for gamete intrafallopian transfer, 191–92
in the office, 77–99
reaction to, as a complication of in vitro fertilization, 172
for in vitro fertilization, 165
Aneuploidy, and diminished ovarian reserve, 35
Antibiotics, prophylactic, prior to surgery, 81–82
Antibodies
anti-sperm, 13–14
therapy for, 19–20
on sperm, 2
Antidotes, for sedation medications, 89
Antral follicles, relationship of count of with assisted reproductive therapy outcomes, 31
Anxiolytics, preoperative administration of, 80
Asherman syndrome, development of, after curettage, 118
Aspiration, protecting against, with premedication, 8–81
Assay, variability of, immunoassays of luteinizing and follicle-stimulating hormones, 31–35
Assisted hatching, 35
Assisted reproductive technology (ART), 20, 77, 145
effects of inhibin levels on success of, 26
gonadotropins used in, 101–2
for male factor infertility, 22
for managing proximal tubal obstruction, 137
multifetal gestations in, 197–98
ultrasound guidance for embryo transfer at, 168
Audiovisual system, educational, for the laboratory, 76
Azoospermia, testicular biopsy for evaluating, 157–59
Basal body temperature (BBT) chart, 3
Basal follicle-stimulating hormone ratio to luteinizing hormone, 27–28
Bates Consulting Company, model for infertility treatment, 58–59
Benzocaine, 79
Billing, descriptive terminology used in, 85
Biopsy, of the testis, 17–18
Bleeding, after hysteroscopy, 124
Body mass index, and gamete intrafallopian transfer in an office setting, 192–93
British Medical Journal, early description of laparoscopy in, 143
Bromocriptine, for treating pituitary tumors, 19
Bupivacaine (Marcaine), administration during fallopian tube transfer, 82
Capitated payment, in fertility treatment, 58
Carbon dioxide, for uterine cavity distension, 120
Cefotetan, prophylactic administration of, before surgery, 81
Centers for Disease Control (CDC), reporting data to with computers, 76
Centrifugation, density gradient, for sperm preparation, 113–14
Cervical mucus, interaction with sperm, 14
Cervical stenosis, treatment of, 147–49
Checklist
for in-office surgery with anesthesia, 85–86
postoperative, 97
preoperative, for in-office surgery with anesthesia, 92
Chocolate cyst, in endometriosis, 42
Chromosomal anomalies
Down syndrome, 7
male reproductive dysfunction accompanying, 15–51
risk for, as a function of age, 7
Cisatracurium, 78
Clean rooms, specifications for, 64
Clinical results, of ovulation induction, 106–7
Clomiphene citrate (Clomid)
gonadotropins for treating anovulation, 100
for treating anovulation, 7
for treating oligospermia, 19
Clomiphene citrate challenge test (CCCT), 28–31
Coaxial falloposcopy, 13–31
Color power angiography (CPA), 45–46
Complications
of falloposcopy, 133–34
of gamete intrafallopian transfer, 192–93
of hysteroscopy, 123–24
of ovulation induction, 100, 195–202
with gonadotropin therapy, 107, 111
of penile vibratory stimulation, 154
postoperative, in gamete intrafallopian transfer, 193
of pregnancy, and age, 59
of processing of retrograde ejaculates, 157
of rectal probe electroejaculation, 155
of transcervical tubal cannulation, 139–40
of treatment for cervical stenosis, 148–49
of in vitro fertilization, 172
Comprehensive History of Infertility, The (Burns and Greenfeld), 54–55
Computers, capability of, 76
Conception, spontaneous, after gonadotropin-induced pregnancies, 109
Confirmation, of infertility, 1
Congenital anomalies
adrenal hyperplasia
androgen excess in, 15
androgen excess in, treating, 19
after gonadotropin therapy, studies, 109
See also Genetic abnormalities
Congenital bilateral absence of the vas deferens (CBAVD), 150
Consent forms, for ultrasound-guided follicle aspiration, 94–95
Contraindications
to anesthesia in the office, 83
to controlled ovarian hyperstimulation, 109–10
to falloposcopy, 128–29
to gamete intrafallopian transfer, 187
to hysteroscopy in the office, 119–20
to penile ejaculatory stimulation, 152
to percutaneous epididymal sperm aspiration, 159
to rectal probe electroejaculation, 154
to retrograde ejaculate processing, 156
to testicular biopsy, 158
to transcervical tubal cannulation, 138
to treating cervical stenosis, 147
to in vitro fertilization, 162
Contrast agents, in sonography, 42–43
Controlled ovarian hyperstimulation, 43
and intrauterine insemination, 10–115
See also Ovarian hyperstimulation syndrome
Coping, with infertility, psychosocial issues, 49–57
Costs
of hysteroscopy, justifying in managed care, 124
of microlaparoscopy
justifying in managed care, 141–42
versus other procedures, 142
versus traditional laparoscopy, 144
of transcervical tubal cannulation, versus microsurgical anastomosis and ART, 137
of unstimulated in vitro fertilization, 176–77
of in vitro maturation, 178
Counseling, about ovulation induction, 102–3
Couples therapy, in infertility, 55
Credentialing, of professionals, 6–61
Cryopreservation, of embryos, 171–72
Cryptorchidism, effect on the germinal epithelium, 10
Culture, of embryos, for in vitro maturation, 181
Cumulative probability of pregnancy, 7
Index

Current procedural terminology (CPT), 85
Cystic fibrosis, family history of, and male infertility, 11

Database analysis, 60
Design, of a laboratory, 72
Diabetes, effect on potency and ejaculatory function, 11
Diagnosis
  of infertility by transabdominal and transvaginal ultrasonography, 4–46
  studies of male infertility, 16–18
Diazepam (Valium), premedication with, in surgery, 80
Diet pills, allergy to, special considerations in surgery, 85
Discharge instructions
  for a laparoscopic procedure, 99
  for ultrasound-guided follicle aspiration, 98
Disease
  accompanying ovulatory dysfunction, evaluating, 102–3
  screening for, prior to surgery, 80
Distension, of the uterine cavity, for hysteroscopy, 120
Doppler ultrasound, 45–46
Down syndrome (trisomy 21), risk of, as a function of age, 7
Doxycycline
  prophylactic administration of, before surgery, 81
  for treating distal tubal occlusion, 4
  for treating pyospermia, 20
Droperidol, for reducing nausea and vomiting, 81
Drugs, preparations of gonadotropins, 101–2. See also Medications
Ductal system, sperm transport in, 151
Duration, of therapy, initial counseling about, 102–3
Ectopic gestation, 198–99
  management of, 106, 172
  rate of, in gamete intrafallopian transfer, 193
Ejaculatory duct obstruction (EDO), 15–51
Ejaculatory function
  effect on potency and ejaculatory function, 11
  neurophysiology of, 151
Electrical system, for the laboratory, 74–76
Embryos
  culture of, 171
  number of, for in vitro fertilization/embryo transfer, 34
  thawing of, 172
Embryo transfer
  equipment for, 163
  preparation for, 171
  procedure for, 167–68, 181
Empiric therapy, for male infertility, 19
Endometriosis, 41–42
Endometrium
  biopsy of, in the secretory phase, 3
  ultrasonography for evaluating, 4–41, 105
  in stimulated cycles, 44
Endoscopy
  for evaluating the fallopian tube, 127–36
  for evaluating the pelvic anatomy, 5
Energy, for humidification, 70
Energy sources, for hysteroscopy, 121–22
Epidural anesthesia, advantages of, 78
  studies, 79
Equipment
  for anesthesia, in an office setting, 83–85
  for cervical dilatation, 148
  energy sources for hysteroscopy, 121–22
  for gamete intrafallopian transfer, 188
  hysteroscopes, structure variations, 12–21
  for an office laboratory, 71–72
  for penile vibratory stimulation, 153
  for percutaneous epididymal sperm aspiration, 159
  for rectal probe electroejaculation, 154–55
  for retrograde ejaculate processing, 156
  for testicular biopsy, 158–59
  for transcervical tubal cannulation, 138–39
  for in vitro fertilization, 163–64
Estradiol, levels of
  and basal follicle-stimulating hormone levels, 27–28, 106
  and ovarian stimulation, 104
  and timing for oocyte aspiration, 175–76
Estrogen, urinary determination of, for monitoring ovulation induction, 104
Etiology
  of cervical stenosis, 147
  of ejaculatory duct obstruction, 15–51
Euestrogenic normogonadotropic ovulatory dysfunction, 103
Evaluation
  of the female for infertility, 1–9
  laboratory, for male infertility, 12–18, 15–51
  of the male factor in infertility, 1–2, 1–23
  results, 18
  uterine, hysteroscopic, 116
Fallopian tube
  endoscopic evaluation of, 127–36
  ultrasonography of, 42
Fallopian tube transfer, anesthesia during, 82–83
Falloposcopy, equipment and technique, 13–34
Fecundity
  and age, 59
  defined, 7
Fentanyl, administration in surgery, without anesthesia personnel present, 82
Fertility rate, in the United States, 1
Fertilization assessment, for in vitro fertilization, 171
Fever, effect on testicular function, 11
Fiberoptic technology, microslaparoscopy using, 143
Fibroids, submucous, hysteroscopic diagnosis of, 42
Filtration, of air, 65–66
Follicle aspiration
  equipment for, 163
  procedures, 165–67, 176
  ultrasound-guided
    anesthesia during, 82
    preoperative instruction, 93
Follicles
  functional ovarian, documenting the presence of, 103
  maturity of, evaluating, 175
  monitoring, for in vitro maturation/in vitro fertilization, 181
  puncture of, in vitro fertilization, 44–45
Follicle-stimulating hormone (FSH)
  administration in ovulation induction, 10–101
  and age, 24–28
  assay of, to evaluate male infertility, 15–16
  basal levels of, intercycle and intracycle variability of, 26–27
  to initiate and maintain spermatogenesis, 101
Follicular fluid, accumulation of anesthetic agents in, 79
Freezers, for the in vitro laboratory, 75
Frozen semen, for intrauterine insemination, 11–11
Fructose, seminal, for evaluating ejaculatory duct obstruction, 13
Future, of treating age-related infertility, 35
Gamete intrafallopian transfer (GIFT), 184–94
  anesthesia for, 77
  comparison with controlled superovulation, 111
  multifetal gestations with, 197
  success rate of, comparison with in vitro fertilization, 161
Gametes, donor, pregnancy following treatment with, 53–54
Gamete technologies. See Assisted reproductive technology (ART)
Gaseous pollutants, from construction materials, 7–71
Gas supply, in a laboratory, 73–74
Gender, and response to infertility, 51–52
Gender ratios, after gonadotropin therapy, 108–9
General anesthesia, 77–78
Genetic abnormalities
  screening for, and recommendation for
    preconception counseling, 80
  testing for, in male evaluation, 16
See also Chromosomal anomalies; Congenital anomalies
Gentamicin, prophylactic administration of, before surgery, 82
Glucocorticoids, for treating congenital adrenal hyperplasia, 19
Gonadotoxins, list of, 11
Gonadotropin-releasing hormone, agonists to, down-regulation with, and ovarian responsiveness, 32–33
Gonadotropins
  administration of, in gamete intrafallopian transfer, 188–89
  dosage of, in treating diminished ovarian reserve, 32
  exogenous, indications for treatment with, 10–115
  See also Human chorionic gonadotropin (hCG);
    Human menopausal gonadotropin (hMG);
    Human pituitary gonadotropin (hPG)
Gonadotropin therapy, outcomes of, 106–7
Group therapy, in infertility, 55
Growth hormone, role in follicular development, 34
Guidelines for nonoperating room anesthetizing locations, American Society of Anesthesiologists, 91
Guilt, as a response to infertility, 50
Heating, ventilating and air conditioning (HVAC) system, design of, 64–66
Heterotopic pregnancies, 198–99
Histerelin, response of the pituitary to, 33
History
  medical
    risk factors for aspiration after anesthesia, 81
    of the infertile male, 1–11, 150
    of outpatient surgery
      laparoscopy under local anesthesia, 143–44
      modern, 77
    tests for tubal patency, 141
    of in vitro fertilization, 161–73
Hood, placement of, in planning a laboratory, 72
Hormones
  medical therapy for male infertility related to, 18–19
  screening for, in male evaluation, 15–16
Human chorionic gonadotropin (hCG)
  early ovarian hyperstimulation syndrome and, 195
  timing of administration, and patient preparation, 81
Human menopausal gonadotropin (hMG)
  ovulation induction with, 100
  rate of ovarian hyperstimulation syndrome and, 195
  spontaneous abortion rate with use of, 199
  for treating hypogonadotrophic hypogonadism, 7
Human pituitary gonadotropin (hPG), ovulation induction with, 100
Humidity, control of, in a laboratory, 69–70
Hydrogen receptor antagonist, preoperative administration of, to prevent aspiration, 81
Hypergonadotropic hypogonadism, symptoms of, 103
Hyperprolactinemia
symptoms of, 15
treating, 18–19
Hypogonadism, sources of androgen excess inducing, 15–16
Hypogonadotropic hypogonadism
medical treatment of, 18–19
symptoms of, 102–3
Hypothalamic pituitary dysfunction
outcomes of gonadotropin therapy in, 107
Hypothalamic pituitary failure, outcomes of
gonadotropin therapy in, 107
Hyskon, for uterine distension, advantages and risks of
using, 120
Hysterosalpingo-contrast sonography, 43
Hysterosalpingography (HSG), 4
for fallopian tube evaluation, 127
for tubal patency evaluation, 141–42
for uterine evaluation, 116
Hysteroscopy, diagnostic and therapeutic, 116–26
Identity shift, on achieving pregnancy, 53
Immunobead test, for anti-sperm antibodies, 14
Incubators, air supply to, 73
Indications
for controlled ovarian hyperstimulation, 109–10
for falloposcopy, 128–29
for gamete intrafallopian transfer, 185–87
for gonadotropin therapy, 103
for hysteroscopy, 116–19
for penile ejaculatory stimulation, 152
for percutaneous epididymal sperm aspiration, 159
for processing retrograde ejaculates, 156–57
for rectal probe electroejaculation, 154
for testicular biopsy, 157–58
for transcervical tubal cannulation, 137–38
for treating cervical stenosis, 147
for in vitro fertilization, 162
Individual therapy, in infertility, 55
Indomethacin, administration prior to embryo transfer,
167
Infection, after hysteroscopy, 124
Infertility, defined, 116
Inguinal surgery, reproductive effects of, 11
Inhibin, changes in levels of with age, 25–26
Insemination, for male factor treatment, outcomes of, 6
Instruments, monitoring system for the laboratory, 75
International Classification of Diseases, 85
Intracytoplasmic sperm injection (ICSI), 17–18
procedure for, 17–71
Intratubal gamete transfer, 184–94
Intrauterine insemination
and controlled ovarian hyperstimulation, 10–115
technique, 115
Intrauterine masses, identifying with hysteroscopy,
117–18
Intravasation syndrome, following oil-based contrast
material use in hysterosalpingography, 4
Intubation, during laparoscopy, contraindications to,
82–83
In vitro fertilization (IVF), 43–44, 161–73
hysteroscopy prior to, 119–22
laboratory for, 63–76
outcomes of, and intercycle variability in follicle-
stimulating hormone levels, 27
sperm-bound antibodies as a contraindication to, 20
unstimulated, 174–83
In Vitro Fertilization Registry, 177
In vitro maturation (IVM), 178–79
Jacobaeus of Sweden, historic laparoscopy by, 143
Kallmann syndrome
medical treatment for, with human chorionic
gonadotropic, 18–19
symptoms of, 15
Laboratory in the office
evaluation for male infertility, 12–18
preparation for in vitro fertilization, 163–64, 168–69
setup basics, 63–76
tests for evaluation of male infertility, 15–51
tests recommended for women, based on age, 80
Laparoscopic procedure, discharge instructions, 99
Laparoscopic transfer versus transvaginal transfer, 192
Laparoscopy
for diagnosing tubal and peritubal pathology, 128
diagnostic, in idiopathic infertility, 187
for fallopian tube evaluation, 127
preoperative instructions, 94
Latex, allergy to, special considerations in surgery, 85
Layout, model laboratory, in a reproductive center, 68
Leiomyomas, identification and treatment of, 117–18
Leukocytes, in semen, 13
Leuprolide acetate, ovarian responsiveness and
pregnancy rate after administration of, 34
Lewin VHI, algorithm for fertility treatment, 59
Lidocaine, 79
Lighting, effect on in vitro cell cultures, 71
Linear everting catheter falloposcopy, 131–32
Line filters, for commercial compressed air tanks, 73
Local anesthesia, 79
for gamete intrafallopian transfer, 192
for laparoscopy, history of, 143
list of agents for, 89
for microlaparoscopy, 141
with ultrasound-guided follicle aspiration, 82
Loss
associated with infertility, 5–51
of pregnancy, 53
Index 207
Luteinizing hormone (LH)  
administration of, in ovulation induction, 10–101  
assay of  
to evaluate male infertility, 15–16  
in unstimulated in vitro fertilization, 174, 176

Male  
response to infertility, 52  
treating reproductive dysfunction of, 15–60

Managed care, effect on office-based infertility practice, 58–62, 141

Management  
of fallopian tube problems, 134–35  
going, in controlled ovarian hyperstimulation, 111  
of proximal tubal obstruction, table, 140

Mechanism of controlled ovarian hyperstimulation/intrauterine insemination, 109–11

Media, for assisted reproductive technology, 168–69

Medical therapy, for male infertility, 18–21

Medications  
amoxicillin, 82  
ampicillin, 82  
benzocaine, 79  
bromocriptine, 19  
bupivacaine (Marcaine), 82  
cefotetan, 81  
cisatracurium, 78  
clomiphene citrate (Clomid), 7, 19, 100  
doxycycline, 4, 20, 81  
droperidol, 81  
fentanyl, 82  
gentamicin, 82  
histerelin, 33  
before hysteroscopy, 123  
indomethacin, 167  
leuprolide acetate, 34  
lidocaine, 79  
meperidine (Demerol), 82  
metoclopramide (Reglan), 81  
mevacurium, 78  
middazolam (Versed), 78, 80, 82  
ondansetron (Zofran), 81  
triazolam (Halcion), 80  
valium, 167  
vancomycin, 82  
Medicines, names and mechanism of action, 89

Meiosis, control of, 178–79

Mental health professional, role in infertility treatment, 54–55

Meperidine (Demerol), administration in surgery, without anesthesia personnel present, 82  
Metoclopramide (Reglan), preoperative administration of, to prevent aspiration, 81

Metroplasty, hysteroscopic, for treating uterine septum, 118

Mevacurium, 78

Microlaparoscopy, 141

Microsurgical epididymal sperm aspiration (MESA), 22, 160

Microtubular obstructive disease, surgical treatment of, 22

Midazolam (Versed)  
administration in surgery, without anesthesia personnel present, 82  
premedication with, in surgery, 78, 80  
Miscarriage rate, after in vitro fertilization, and age, 34

Monitored anesthesia care (MAC), 78  
in ultrasound-guided follicle aspiration, 82

Monitoring  
clinical, of ovarian response, 103–5  
cycle, in unstimulated in vitro fertilization, 175  
Morphologic tests, of ovarian responsiveness, 31  
Müllerian abnormalities  
detecting with ultrasound, 40  
spontaneous abortion associated with, 118

Multifetal gestations  
in assisted reproduction, complications of, 172  
in ovulation induction, 197–98  
risk of  
with human chorionic gonadotropin administration, 103, 108  
in assisted reproduction, 53

Mumps, postpubertal, 11

Muscle relaxants, for outpatient use, 78

Myomas, ultrasound for detecting, 40, 42

National College for Clinical Laboratory Standards (NCCLS), 74

National Fire Protection Association (NFPA), 73

Networks, social and legal issues in, for reproductive endocrinologists, 61

Nonsteroidal antiinflammatory drugs (NSAIDs)  
before hysteroscopy, 123  
for treating pyospermia, 20

Number needed to treat (NNT), evaluative tool for economic calculations, 142

Nurse, preparation for anesthesia and surgery in the office, 83

Obstruction, ejaculatory duct, treating, 21–22

Ondansetron (Zofran), for reducing nausea and vomiting, 81

Oocyte-cumulus complex (OCC), harvesting, 169

Oocytes  
collection of, for in vitro maturation/in vitro fertilization, 181

maturation of, 178–79  
for in vitro maturation/in vitro fertilization, 181
minimizing exposure to anesthesia, 77–78
minimizing exposure to medication, 80
preparation for retrieval for in vitro fertilization, 169
Open biopsy, testicular, 158–59
Operating rooms, specifications for, air delivery systems, 63
Opioid anesthetics, 77–78
Oral contraceptives, pretreatment with, 34
Outcomes
of assisted reproductive technology, effects of inhibin levels on, 25
of controlled ovarian hyperstimulation, 111
database for analysis of, 60
of pregnancies, with ovarian induction, 198–99
of unstimulated in vitro fertilization, success rates, 177–78
of in vitro fertilization, 27
complications involving, 172
Ovarian cancer, risk of, in ovulation induction, 199–201
Ovarian hyperstimulation syndrome (OHSS), 195–96
as a complication to gamete intrafallopian transfer, 193
as a complication to in vitro fertilization, 172
risk of, with human chorionic gonadotropin administration, 103
risks accompanying, 105–9
therapy for, 108
See also Controlled ovarian hyperstimulation
Ovarian reserve
diminished
as a contraindication to in vitro fertilization, 162
and reproduction, 24, 28–29
evaluating during patient selection for unstimulated in vitro fertilization, 175
Ovarian torsion, risk of, with stimulated ovaries, 193
Ovaries
basal follicle-stimulating hormone screening with one only, 27
sonography for evaluating, 41–42
Ovulation
assessment of, 2–3
defects in, 6
induction of, 43, 10–115
complications of, 195–202
verifying the occurrence of, 3
Parthenogenesis, induction by propofol, 79
Pathogenesis, of ovarian hyperstimulation syndrome, 195–96
Pathology, of the tubal lumen, 132–33
Patient
preparation for anesthesia and surgery in the office, 83
preparation for hysteroscopy, 123
selection of
for gamete intrafallopian transfer, 186
for ovulation induction, 102–3
for unstimulated in vitro fertilization, 178
for in vitro fertilization, 175
for in vitro maturation, 181
Payment, insurance for infertility services, 60
Pelvic inflammatory disease (PID)
considerations in prophylactic administration of antibiotics before surgery, 81
ultrasonographic identification of, 42
Penile vibratory stimulation (PVS), to obtain a semen specimen, 152
Percutaneous biopsy, testicular, 158–59
Percutaneous epididymal sperm aspiration, 159–60
Personnel, for anesthesia administration, 78
traveling, 82
Physical examination
of the male, 11–12
in treating male reproductive dysfunction, 150
Physicians
preparation for anesthesia and surgery in the office, 83
recommendations for, in managing psychosocial issues, 56
Physiology
of ovulation induction, 10–101
reproductive, of the male, 151
Pituitary tumor, excluding, in hyperprolactinemia, 18–19
Plumbing, for a laboratory, 73
Polycystic ovary disease (PCO), 41
Polyps, endometrial
association with infertility, 117
ultrasonography for evaluating, 4–42
Power, reliability of, for the laboratory, 74–75
Pregnancy
early, ultrasound images in, 44
after infertility, special considerations in, 52–53
rate of, and basal follicle-stimulating hormone levels, 25–26
wastage in gonadotropin-induced ovulation, 108
See also Multifetal gestations
Preparation
for clinical procedures, in vitro fertilization, 164–65
for office surgery, 83
for transcervical tubal cannulation, 138
for in vitro fertilization, 162–63
Pressurization, in the air delivery system, 67
Preterm delivery, as a complication of assisted reproductive technology, 198
Prevention
of multifetal gestations, 197
of ovarian hyperstimulation syndrome, 197
Primary care, evaluation of women with infertility in, 1
Primate studies, of in vitro maturation, 179–80

Procedure
in cervical dilatation, 148
in gamete intrafallopian transfer, 188–91
in hysteroscopy, 122–23
in penile vibratory stimulation, 153–54
in percutaneous epididymal sperm aspiration, 159
in processing retrograde ejaculates, 156–57
in rectal probe electroejaculation, 155
in transcervical tubal cannulation, 139
in vitro fertilization, 164–72

Progesterone, luteal phase serum levels of, 3
and pregnancy rate in women over forty, 34–35

Prophylaxis, against postoperative nausea and vomiting, 81

Propofol, experimental administration to mice, effect on fertilization rate, 79

Proximal tubal obstruction (PTO), evaluation and management of, 137

Psychological evaluation, 54–55
Psychosocial issues, in coping with infertility, 49–57, 141

Pyospermia, treatment of, 20

Quality control, in the laboratory, for in vitro fertilization, 168

Recombinant DNA technology, production of gonadotropins using, 102

Recommendations, for ovarian reserve screening, 31–32

Reconstruction, microsurgical, in epididymal obstruction, 152

Rectal probe electroejaculation, 154–56

Regional anesthesia, 78
with ultrasound-guided follicle aspiration, 82–83
Relaxin, levels of, and risk of preterm delivery, 198

Retrograde ejaculation, treatment of, 20

Risk factors
for development of sperm-bound antibodies, 14
for ovarian hyperstimulation syndrome, 108, 196–97

Room construction, for a laboratory, 7–72

Rubin test, for tubal patency, 141

Saline infusion sonohysterography (SIS), 42–43
Salpingoscopy, equipment and technique, 129–30
Scopolamine, transdermal, for reducing nausea and vomiting, 81

Screening
with the clomiphene citrate challenge test, 29
for disease, prior to surgery, 80
for genetic diseases, 80
ovarian reserve
recommendations for, 31–32
threshold values, 3–35

Semen
adjunctive studies of, 13–14
analysis of, 2, 12–13
preparing for in vitro fertilization, 169–70

Septate uterus, and pregnancy wastage, 118

Sex hormone-binding globulin (SHBG), effect of, on measurement of unbound testosterone, 15

Side effects, in controlled ovarian hyperstimulation, 111

Smoking, and age at menopause, 30

Society for Assisted Reproductive Technology (SART), statistics on advantages of in vitro fertilization, 161

Sodium citrate, preoperative administration of, to prevent aspiration, 81

Sonography, for detecting uterine structural lesions, 5

Sperm, preparation of, for controlled ovarian hyperstimulation, 11–11

Spermatogenesis, physiology of, 151

Sperm capacitation index (SCI), 14

Sperm function
penetration assay, 14–15
tests of, 14–15

Sperm washing (SW), 110
technique, 114

Spinal anesthesia, advantages of, 78

Spinal cord injury, adjunctive techniques in, and pregnancy rates, 155–56

Strategy
for coping, and response to a failed treatment cycle, 50
for infertility testing, 1
female evaluation, 5

Subacute bacterial endocarditis (SBE), risk evaluation and prophylactic antibiotic administration, 81–82

Succinylcholine, 78

Superovulation, risk of, with human chorionic gonadotropin administration, 103

Support, psychological, 55

Surgery, retroperitoneal lymph node dissection, 1–11

Surgical therapy, for male infertility, 21–22

Swim-up (SU) procedure, for sperm preparation, 110, 113

Symptoms
of ectopic pregnancy, 198–99
of ovarian hyperstimulation syndrome, 197
Technology
  fiberoptic, microlaparoscopy using, 143
  of in vitro maturation, 18–81
Temperature, control of, in a laboratory, 69–70
Testicle, undescended, 1–11
Testicular biopsy
  for evaluating azoospermia, 157–59
  sedation during, 83
Testicular sperm extraction (TESE), 157–59
Testosterone, serum levels of, 15
Three dimensional scan, transvaginal ultrasound, 46
Timing
  of human chorionic gonadotropic injection, 175–76
  of hysteroscopy, 122–23
Transcervical microendoscopy, of the tubal lumen, 13–34
Transcervical tubal cannulation, 137–40
Transfimbral salpingoscopy, 129–30
Transrectal ultrasonography (TRUS), for detecting ejaculatory duct obstruction, 13, 16–17
Transurethral resection, for ejaculatory duct obstruction, 152
Transvaginal transfer versus laparoscopic transfer, 192
Transvaginal ultrasonography (TVUS), 39–48
  advantage of, for oocyte retrieval, 77
  for assessing tubal patency, 128
  in follicle aspiration, and unstimulated in vitro fertilization, 174
  to monitor follicular size, before human chorionic gonadotropin administration, 104
Treatment
  cycle of, typical, 105–6
  of diminished ovarian reserve, 32–35
  ending, decisions about, 52
  of infertility, emotional impact of, 51
  of male factor infertility, 6, 18–22
  monitoring, 43–44
  strategy for, 5–6
  in male reproductive dysfunction, 151–52
Triazolam (Halcion), premedication with, in surgery, 80
Tubal disease, treatment and outcomes, 6
Tubal Embryo Transfer (TET), anesthetics selected for use in, 77–78
Ultrasonography
  for monitoring changes in the cervix and endometrial cavity, 104–5
  for following ovulation induction, 106
  role in infertility evaluation, 39–48
  scrotal, 16
  transrectal, for evaluating male infertility, 16
  Ultrasound-guided follicle aspiration, discharge instructions for, 98
Upper respiratory infection, factors affecting decisions about surgery in the presence of, 81
Urinalysis, postejaculate, 17
Urinary tract infections, and male infertility, 13
U.S. HealthCare, infertility treatment model of, 58
Uterus, perforation of, as a complication of hysteroscopy, 124
Vacuum line, for the laboratory, 74
Valium, administration prior to embryo transfer, 167
Vancomycin, substitution for penicillin in patients with allergy, 82
Varicocele
  gonadal function in the presence of, 12
  surgery for, 21
Varicocelectomy, 151–52
Vasal aplasia, 15–51
  surgical treatment in, 22
Vasectomy, reversal of, 152
VIVA program, prospective payment plan in, 60
Water, purification of, for the laboratory, 74
Women, response to infertility, 51
World Health Organization (WHO), hysterosalpingography versus laparoscopy study, 127
Zygote intrafallopian transfer (ZIFT), 187
  anesthesia for, 77–78
  multifetal gestation rate in, 197