Introduction to Anesthesia Booklet

Topics:

Medical Abbreviations

Machine Check

Common Lab Values

Table Top Setup

A

A&O Alert and oriented
AA Anesthesiologist assistant
AAA abdominal aortic aneurysm
AAAA American Academy of Anesthesiologist Assistants
AAF African-American female
AAM African-American male
AAPA American Association of Physician Assistants
Ab; ab Abortion; antibiotics
ABG Arterial blood gas
ABL Allowable blood loss
abn Abnormal
ACL Anterior cruciate ligament
ACLS advanced cardiac life support
ACS Acute coronary syndrome
ACT Activated clotting time
A.C.T.H., ACTH Adrenocorticotropic hormone
ADD Attention deficit disorder
ADHD Attention deficit and hyperactivity disorder
adm. Admission, administer(ed)
AF Atrial fibrillation (or A fib)
A/G Albumin-globulin ratio (blood)
AI Aortic insufficiency
AICD Automated implantable cardioverter defibrillator
AIDS Acquired immuno-deficiency syndrome
AKA Above the knee amputation
AK Above knee
alb. Albumin
ALI Acute lung injury
alk. phos. Alkaline phosphatase
ALS Amyotrophic lateral sclerosis (Lou Gehrig's Disease)
AMA Against medical advice, American Medical Association
AMI Acute myocardial infarction
amt Amount

amp Ampule
ant Anterior
A&O x 3 Alert and oriented to person, place, and time
AODM Adult onset diabetes mellitus
A/P, AP Anterior-posterior, anteroposterior
aPTT Activated partial thromboplastin time
AR Aortic regurgitation
ARDS Adult respiratory distress syndrome
AROM artificial rupture of membranes

AS Aortic stenosis
ASA Aspirin, American Society of Anesthesiologist
ASC Ambulatory surgery center
ASCAD Arteriosclerotic coronary artery disease
ASCVD Arteriosclerotic cardiovascular disease
ASD Atrial septal defect
ASHD Arteriosclerotic heart disease
AST Aspartate aminotransferase (formerly SGOT)
ATN Acute tubular necrosis
AV Atrioventricular; assisted ventilation
A/V Arterio-venous
AVF Arteriovenous fistula
AVG Arteriovenous graft
AVM Arteriovenous malformation
AVR Aortic valve replacement

B

B bilateral
Ba barium
BCLS basic cardiac life support
BCP birth control pills
BE barium enema
BH Bair Hugger
b.i.d./B.I.D. twice a day
B.I.N. twice a night
BK below knee
BLBS= bilateral breath sounds and equal
BKA below the knee amputation
BM bowel movement
BMI body mass index
BMR basal metabolic rate
BMT bilateral myringotomy tubes
BP blood pressure
BPH benign prostatic hyperplasia
bpm beats per minute
BRBPR bright red blood per rectum
BS breath sounds; bowel sounds; blood sugar
BSA body surface area

BSO bilateral salpingo-oophorectomy
B/U back-up
BUN blood urea nitrogen
BW birth weight
bx biopsy

C

c with
C-1, C-2,etc first cervical vertebra, etc.
CA cancer, carcinoma
Ca calcium
CABG coronary artery bypass graft
CaCl calcium chloride
CAD coronary artery disease
CaGl calcium gluconate
CASHD coronary artery symptomatic heart disease
Cal. calorie
cap. capsule
CAPD continuous ambulatory peritoneal dialysis
CAT computerized axial tomography
CBC complete blood count
CBF cerebral blood flow
cc cubic centimeter
C_{CR} creatinine clearance
CCU coronary care unit or critical care unit
CEA carotid endarterectomy
CF cystic fibrosis
CFX circumflex coronary artery
CHD congenital heart disease
CHEM-6 Na^+, K^+, Cl^-, CO_2, glucose, BUN
CHEM-7 Chem-6 + creatinine
CHEM-14 total bilirubin, total protein, albumin, calcium, phosphorus, alkaline phosphatase, lactic dehydrogenase, SGOT, creatinine, uric acid, cholesterol, MSI, GGT, SGPT
CHEM-23 CHEM-6 + CHEM-14 + CPK, direct bilirubin, triglycerides
CHF congestive heart failure
CHI closed head injury
Chol. cholesterol
CI cardiac index
CICU cardiac intensive care unit
CK creatine kinase
Cl chloride
cm. centimeter
$CMRO_2$ cerebral metabolic requirement of O_2
CMV cytomegalovirus
CNS central nervous system
c/o complained of
CO cardiac output
CO_2 carbon dioxide, bicarbonate

COPD chronic obstructive pulmonary disease
CP cerebral palsy; chest pain
CPAP continuous positive airway pressure
CPB cardiopulmonary bypass
CPK creatinine phosphokinase
CPR cardiopulmonary resuscitation
Cryo cryoprecipitate
CRNA certified registered nurse anesthetist
C & S culture and sensitivity
C/S Cesarean section delivery
CSF cerebrospinal fluid
CT; C/T computed tomography (see CAT)
CTA clear to auscultation
CTR carpal tunnel release
CTS carpal tunnel syndrome
Cu copper
CV controlled ventilation / cardiovascular
CVA cerebral vascular accident
CVICU cardiovascular intensive care unit
CVP central venous pressure
c/w consistent with
CXR chest X-ray

D

D5W dextrose 5% in water
D5 1/2NS dextrose 5% in 0.45% normal saline
D5LR dextrose 5% in Lactated Ringers
D10W dextrose 10% in water
D50 dextrose 50%
D&C dilation and curettage
D/C discontinue
DDD degenerative disc disease
D.D.S. doctor of dental science
DI diabetes insipidus
DIC disseminated idiopathic coagulopathy
DIFF. differential (blood count)
DJD degenerative joint disease
DKA diabetic ketoacidosis
dl deciliter
DL direct laryngoscopy
DLCO diffusion capacity of lung-carbon monoxide test
DLT double-lumen tube
DMD Doctor of Medical Dentistry
DNR do not resuscitate
D.O. Doctor of Osteopathic Medicine
DOA dead on arrival
DOB date of birth
DOE dyspnea on exertion

DPL diagnostic peritoneal lavage
DPT diphtheria-pertussis-tetanus
DT delirium tremens
DTRs deep tendon reflexes
DVT deep vein thrombosis
dx; Dx diagnosis
Dz disease

E

EBL estimated blood loss
EBT endobronchial tube
EBV estimated blood volume; Epstein-Barr virus
ECCE extracapsular cataract extraction
ECG electrocardiogram
ECMO extracorporeal membrane oxygenation/oxygenator
ECT electroconvulsive therapy
ED emergency department
EDC estimated date of confinement
EEG electroencephalogram
EF ejection fraction
EGA estimated gestational age
EGD esophagogastroduodenoscopy
EJ external jugular vein
EMG electromyogram
ENT ear, nose, throat
EOM extraocular muscles
ER emergency room
ESR erythrocyte sedimentation rate
ESRD end stage renal disease
ESRF end stage renal failure
EST electroshock therapy
ESWL external sound wave therapy
$ETCO_2$ end-tidal carbon dioxide
EtOH alcohol
ETT endotracheal tube
EUA examination under anesthesia
Ex lap exploratory laparotomy

F

FANA Florida Association of Nurse Anesthetists
F.B. foreign body
FBS fasting blood sugar
$FeSO_4$ ferrous sulfate (iron)
FEV_1 forced expiratory volume at 1 second
FFP fresh frozen plasma
FHx family history

FHR fetal heart rate
FHT fetal heart tone
FIO_2 fraction inspired oxygen
FRC functional residual capacity
FROM full range of motion
FSA Florida Society of Anesthesiologists
FSH follicle stimulating hormone
FTA fluorescent treponemal/titer antibody
FT_3I free triiodothyronine index
FT_4I free thyroxine index
FTLB full term living birth
FTNB full term normal birth
FTT failure to thrive
F/U follow up
FUO fever of unknown origin
Fx fracture

G

GBS gall bladder series
GC gonococcus
GCS Glasgow Coma Scale
g/dL grams per deciliter
GDM gestational diabetes mellitus
GE gastroesophageal
GERD gastroesophageal reflux disorder
GGT gamma glutamyl transpeptidase
GH growth hormone
GI gastrointestinal
G/P gravida/para
GPI general paresis
G_6PD glucose 6 phosphate dehydrogenase
grav. gravida (pregnancy)
GSW gunshot wound
gtt drops
GTT glucose tolerance test
GU genitourinary
GYN gynecology

H

h, H hour
HAV hepatitis A virus
HBV hepatitis B virus
HCG, hCG human chorionic gonadotropin
Hct hematocrit
HD hemodialysis
HDL high density lipoprotein
HELLP hemolysis, elevated liver enzymes, low platelets (a syndrome)
Hg mercury

Hgb hemoglobin
HGH human growth hormone
HIV human immunodeficiency virus
HME heat-moisture exchanger
H/O history of
H & P history and physical
HPI history of present illness
HPV human papillomavirus
HTN hypertension
Hx; hx history

I

IABP intra-arterial balloon pump
IBW ideal body weight
ICP intracranial pressure
ICU intensive care unit
I & D incision and drainage
IDDM insulin dependent diabetes mellitus
I/E inspiratory-to-expiratory time ratio
Ig A,D,E,G,M immunoglobulin- types A,D,E,G,M
IGP intragastric pressure
IHSS idiopathic hypertrophic subaortic stenosis
IHR inguinal hernia repair
IJ internal jugular vein
IM intramuscular
IMA internal mammary artery
IMV intermittent mandatory ventilation
INR internal normalization ratio
I & O intake and output
IOP intraocular pressure
ITP idiopathic thrombocytopenic purpura
IUD intrauterine device
IUFD intrauterine fetal death
IUP intrauterine pregnancy
IV intravenous
IVC inferior vena cava
IVDA intravenous drug abuse
IVF in vitro fertilization
IVH intraventricular hemorrhage
IVP intravenous pyelogram

J

JODM juvenile onset diabetes mellitus
JVD jugular vein distension

K

K potassium
Kcal, KCAL kilocalorie
KCl potassium chloride
kg kilogram
KUB kidney, ureter, bladder (used when taking an X-ray)
KVO keep vein open

L

L left; liter
L-1, L-2, etc. first lumbar vertebra, etc.
LAD left anterior descending (coronary artery)
lap. laparotomy
lat lateral
LAVH laparoscopic assisted vaginal hysterectomy
LBBB left bundle branch block
LBP low back pain
LBW low birth weight
L & D labor and delivery
LDH lactic dehydrogenase
LDL low density lipoprotein
LE lower extremity
LFT liver function test(s)
LHF left heart failure
LHRH luteinizing hormone releasing hormone
LIMA left internal mammary artery
LLD left lateral decubitus (position)
LLE left lower extremity
LLL left lower lobe
LLQ left lower quadrant
LM left main coronary artery
LMA laryngeal mask airway
LMP last menstrual period
LOC loss/level of consciousness
LP lumbar puncture
LPN licensed practical nurse
LR lactated Ringer's solution
LSO left salpingo oophorectomy
LTL laparoscopic tubal ligation
LUE left upper extremity
LUL left upper lobe
LUQ left upper quadrant
LV left ventricle
LVAD left ventricular assist device

LVE left ventricular enlargement
LVEDP left ventricular end diastolic pressure
LVH left ventricular hypertrophy
LWMA left wall motion abnormality

M

M1 mitral first sound
MAC minimum alveolar concentration; monitored anesthesia care
MAP mean arterial pressure
MBC maximal breathing capacity
MCA motorcycle accident
mcg microgram
MCL mid clavicular line
MD Medical Doctor
MDI metered dose inhaler
mEq milliequivalent
mEq/L milliequivalent per liter
mg milligram
mg/dL milligrams per deciliter
$MgSO_4$ magnesium sulfate
MH malignant hyperthermia
MID-CAB minimally invasive coronary artery bypass
MICU medical intensive care unit
min minute
ml milliliter
mm millimeter
mmHg millimeter of mercury
MOSF multi-organ system failure
MR mitral valve regurgitation
MRI magnetic resonance imaging
MRSA methicillin resistant staph aureus
MS multiple sclerosis; mitral stenosis
MSO_4 morphine sulfate
MSL mid sternal line
MVA motor vehicle accident
MVI multivitamins
MVP mitral valve prolapse
MVR mitral valve replacement

N

N; N_2 nitrogen
Na sodium
N/A not applicable; not available
NAD no apparent distress
NaP sodium pentothal

NG nasogastric
NH_3 ammonia
NI not indicated
NICU neonatal intensive care unit
NIDDM non-insulin dependent diabetes mellitus
NKA no known allergies
NKDA no known drug allergies
NMR nuclear magnetic resonance
N_2O nitrous oxide
NP nurse practitioner
NPH neutral protamine Hagedorn (insulin)
NPO nothing by mouth (nil per os)
NS normal saline
NSAID non-steroidal anti-inflammatory drug
NSR normal sinus rhythm
NSU Nova Southeastern University
NTG nitroglycerine
NTT nasal tracheal tube
N/V nausea and vomiting
N/V/D nausea, vomiting, diarrhea

O

O_2 oxygen
OB obstetrics
OB/GYN obstetrician/gynecologist
OD overdose
OETT oral endotracheal tube
OP CAB off-pump coronary artery bypass
OPS out patient surgery
OR operating room
ORIF open reduction internal fixation
OSA obstructive sleep apnea
O.T. occupational therapy
OTC over the counter

P

p after
P_2 pulmonic second sound
P & A percussion and auscultation
$PaCO_2$ partial pressure of CO_2 in arterial blood
PA pulmonary artery
PAC premature atrial contraction; pulmonary artery catheter
PA-C physician assistant-certified
PACU post anesthesia care unit

PALS pediatric advanced life support
PaO_2 partial pressure of O_2 in arterial blood
PAOP pulmonary artery occluded pressure
Pap Papanicolaou smear (Pap smear)
para parity
PAT paroxysmal atrial tachycardia; pre admission testing
PCA patient controlled analgesia
PCN penicillin
PCWP pulmonary capillary wedge pressure
PD peritoneal dialysis
PDA patent ductus arteriosus
PE pulmonary embolism
PEA pulseless electrical activity
PEEP positive end expiratory pressure
PEG percutaneous endoscopic gastrostomy
per by
PERRLA pupils, equal, round, reactive to light and accommodation
$P_{ET}CO_2$ partial pressure of CO_2 in end-tidal gas
PFO patent foramen ovale
PFT pulmonary function test
pH hydrogen ion concentration
PI present/previous illness
PICC percutaneously inserted central catheter
PICU pediatric intensive care unit
PID pelvic inflammatory disease
PIH pregnancy induced hypertension
PIP peak inspiratory pressure
PLT/plt. platelets
PMHx past medical history
PMS premenstrual syndrome
PND paroxysmal nocturnal dyspnea, post nasal drip
PNV prenatal vitamins
PO by mouth
PO_4 phosphate
POD postoperative day
PONV post-op nausea and vomiting
post-op after operative
p.p. postprandial
PP post partum
PPP pressure points padded
PPD purified protein derivative(TB test)
PPL pleuropneumonia like
PR per rectum
PRBC packed red blood cells
preop before surgery
p.r.n./prn whenever necessary
PROM premature rupture of membranes
PSHx past surgical history
PSP phenolsulfonphthalein test
PSV pressure support ventilation
PSVT paroxysmal supraventricular tachycardia

PT prothrombin time (a.k.a. protime); physical therapy
PTA prior to admission
PTCA percutaneous transluminal coronary angioplasty
PTH parathyroid hormone
PTT partial thromboplastin time
PUD peptic ulcer disease
PVC premature ventricular contraction
PVD peripheral vascular disease
PVR pulmonary vascular resistance

Q

q every
qd every day
qh every hour
q2h every 2 hours
q4h every 4 hours
qHS every night
qid four times a day
qn every night
qod every other day
QRS ventricular wave ECG
q.s. sufficient quantity
QV as much
qwk every week

R

R right
RA rheumatoid arthritis; right atrium
rad unit of measurement of the absorbed dose of ionizing radiation
RAD reactive airway disease
RAH right atrial hypertrophy
RAI radioactive iodine
RAP retrograde autologous prime
RBBB right bundle branch block
RBC red blood cell
RCA right coronary artery
RDS respiratory distress syndrome
RF rheumatic fever
Rh Rhesus factor
RHD rheumatic heart disease
RHF right heart failure
RLE right lower extremity
RLL right lower lobe
RLQ right lower quadrant
RML right middle lobe

RN registered nurse
R/O rule out
ROA occiput right anterior
ROM range of motion
ROP occiput right posterior
ROS review of systems
ROT occiput right transverse
RQ respiratory quotient
RR respiratory rate
RRE round,regular,equal
RRR regular rate and rhythm
RSO right salpingo oophorectomy
RSD reflex sympathetic dystrophy
RSV respiratory syncytial virus
RT respiratory therapy
R/T related to
RTC return to clinic
RT_3U resin triiodothyronine uptake
RUE right upper extremity
RUL right upper lobe
RUQ right upper quadrant
RVAD right ventricular assist device
RVH right ventricular hypertrophy
RWMA right wall motion abnormality
Rx therapy; prescription

S

s without
SA sinoatrial
SAH subarachnoid hemorrhage
SaO_2 oxygen saturation of hemoglobin in arterial blood
SBE subacute bacterial endocarditis
SCD sequential compression device
SD septal defect
SDH subdural hematoma
SGC Swan-Ganz catheter
SGOT serum glutamic oxaloacetic transaminase (AST)
SGPT serum glutamic pyruvic transaminase (ALT)
SHx social history
SIADH syndrome of inappropriate antidiuretic hormone
SICU surgical intensive care unit
SIDS sudden infant death syndrome
SIMV synchronized intermittent mandatory ventilation
SIRS systemic inflammatory response syndrome
SL sublingual
SLE systemic lupus erythematosus
SNP sodium nitroprusside
SOB shortness of breath

S/P status post
SpO_2 saturation of hemoglobin in arterial blood from pulse oximetry
SQ subcutaneous
SR spontaneous respiration
SROM spontaneous rupture of membranes
s/s signs and symptoms
SSS sick sinus syndrome
STAT supersedes tasks of all types (i.e. immediately)
STD sexually transmitted disease
SV stroke volume; supraventricular; spontaneous ventilation
SVC superior vena cava
SvO_2 oxygen saturation of hemoglobin in mixed-venous blood
supp. suppository
SVR systemic vascular resistance
SVT supraventricular tachycardia
sx symptoms; surgery

T

T temperature; thoracic
T_3 iodothyronine
T_4 thyroxine
T & A tonsillectomy and adenoidectomy
TAH total abdominal hysterectomy
TB tuberculosis
TBSA total body surface area
TEE transesophageal echocardiography
TEF transesophageal fistula
TENS transcutaneous electrical nerve stimulation
THA total hip arthroplasty
THR total hip replacement
TIA transient ischemic attack
TIBC total iron binding capacity
tid three times a day
tin three times a night
TKA total knee arthroplasty
TKR total knee replacement
TMJ temporomandibular joint
TOF train of four; Tetralogy of Fallot
TPN total parenteral nutrition
TR tricuspid (valve) regurgitation
TSH thyroid stimulating hormone
TUNA transurethral needle ablation
TURB transurethral resection of the bladder
TURP transurethral resection of prostate
TVH total vaginal hysterectomy
Tx treatment
T & C type and crossmatch

U

U unit
UA urinalysis
UCG urinary chorionic gonadotropins
UE upper extremity
UGI upper gastrointestinal
UO urine output
URI upper respiratory infection
U/S ultrasound
UTI urinary tract infection
UUN urine, urea, nitrogen

V

V_T tidal volume
VAE venous air embolism
VATS video assisted thoracoscopic surgery
VC vital capacity
VCU voiding cystourethrogram
VD venereal disease
V_D volume of distribution
V_D/V_T dead space-to-tidal volume ratio
VDRL venereal disease research lab(lab report)
VHD valvular heart disease
VLBW very low birth weight
VLDL very low density lipoprotein
VMA vanillylmandelic acid
V-P ventricular-peritoneal
V/Q ventilation-perfusion ratio
VS vital signs
VSD ventricular septal defect
VSS vital signs stable
V-Tach ventricular tachycardia

W

WBC white blood cells
wk week
WNL within normal limits
WMA wall motion abnormality
WPW Wolff-Parkinson-White (syndrome)
wt. weight
w/u work up

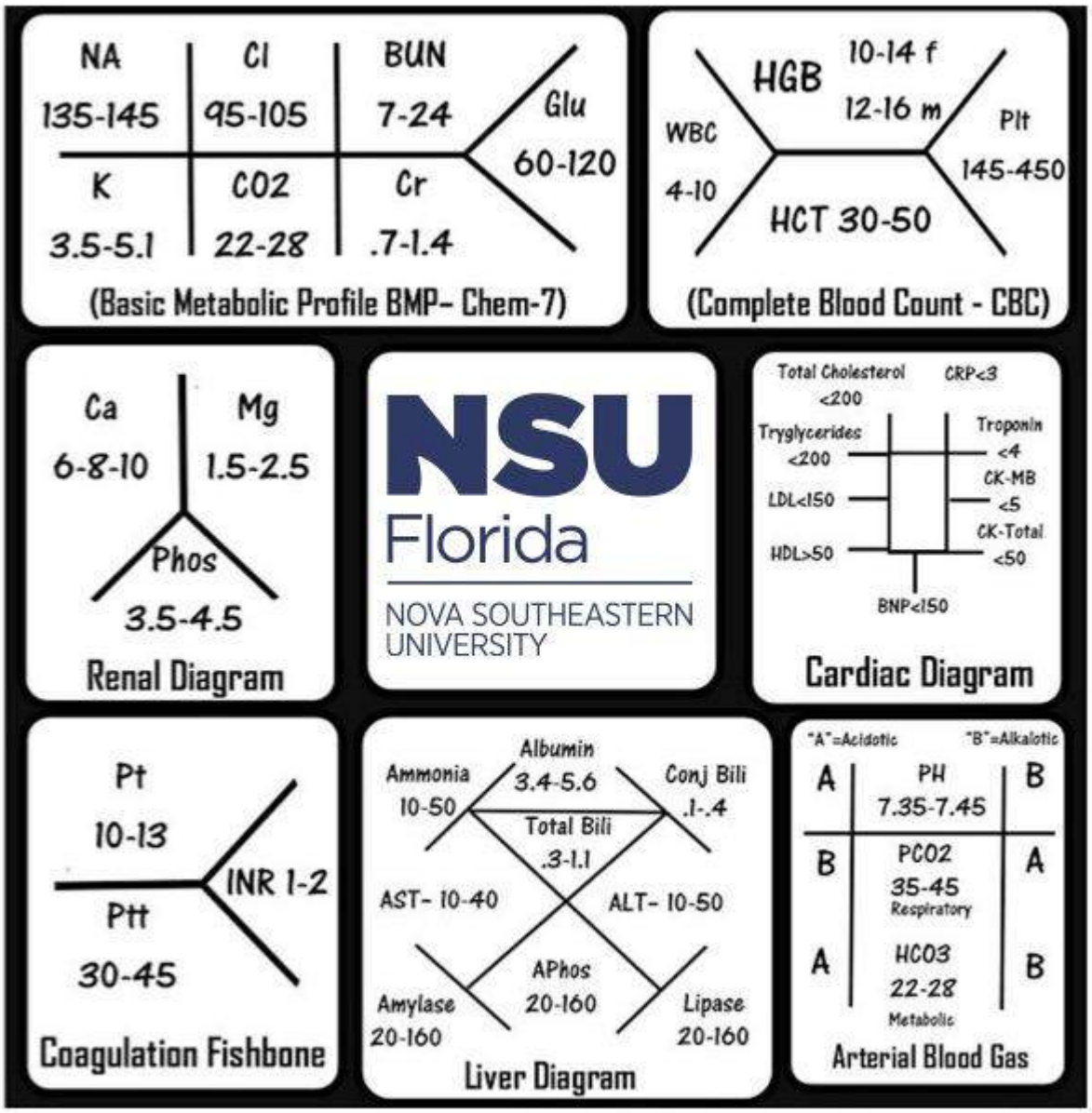
X, Y, & Z

x times
XR X-ray
yo year(s) old
Zn zinc

SYMBOLS

| approximately
@ at
∋ change
¥ check
π decrease, deficiency, depressed, diminished, inferior (position), θ degree
/ divided by; per
= equals
v increase, elevated, enlarged, rising, superior (position), upper - negative
number or pounds
• none, nothing
1θ primary
2θ secondary
3θ tertiary
c with
s without
p after
. decimal [Never use trailing zero (1.0mg) or leading decimal (.1mg)]

NORMAL LAB VALUES


NA
135-145
Cl
95-105
BUN
7-24
Glu
60-120
K
3.5-5.1
CO2
22-28
Cr
.7-1.4
(Basic Metabolic Profile BMP- Chem-7)
HGB
10-14 f
12-16 m
WBC
4-10
Plt
145-450
HCT 30-50
(Complete Blood Count - CBC)
Ca
6-8-10
Mg
1.5-2.5
Phos
3.5-4.5
Renal Diagram
NSU
Florida
NOVA SOUTHEASTERN
UNIVERSITY
Total Cholesterol
<200
CRP<3
Tryglycerides
<200
Troponin
<4
CK-MB
<5
LDL<150
CK-Total
<50
HDL>50
BNP<150
Cardiac Diagram
Pt
10-13
INR 1-2
Ptt
30-45
Coagulation Fishbone
Albumin
3.4-5.6
Ammonia
10-50
Conj Bili
.1-.4
Total Bili
.3-1.1
AST- 10-40
ALT- 10-50
APhos
20-160
Amylase
20-160
Lipase
20-160
Liver Diagram
"A"=Acidotic
"B"=Alkalotic
A
PH
7.35-7.45
B
B
PCO2
35-45
Respiratory
A
A
HCO3
22-28
Metabolic
B
Arterial Blood Gas

MEDICAL JARGON

A-line (n.)

Refers to the words "arterial line" which is a catheter inserted into an artery usually to monitor pressure and waveforms.

Ex. *"He has an* **a-line** *in his right radial artery."*

Amnio (n.)

This is a shortening of the word "amniocentesis" where the obstetrician samples the amniotic fluid through the abdominal wall with a biopsy needle.

Ex. *"her* **amnio** *was negative."*

Bili (n.)

A shortening of the word "bilirubin" which is a yellow bile pigment resulting from the breakdown of hemoglobin.

Ex. *"This patient's total* **bili** *is up."*

Blue 100 (n.) (variants; Code Blue, Dr. Blue)

Ex. *"***Blue 100,** *emergency room,* **Blue 100,** *emergency room,* **Blue 100,** *emergency room"*

A general hospital announcement to all medical staff that there is a life threatening medical emergency and usually involves cardiac resuscitation. The hospital operator repeats the phrase three times and the location of the emergency. Every hospital has its own term for this situation.

bleeder (n.)

Usually refers to an arteriole that has been severed and is pumping blood into the surgical site.

Ex. *"Nurse, can you hand me a stitch, I have a small* **bleeder** *here."*

blower (n.)

Refers to a ventilator.

Ex. *"After we intubate the patient, let's put him on the* **blower***."*

Can also refer to a carbon dioxide blowing instrument used in cardiac surgery.

Ex. *""Turn the* **blower** *on so I can get rid of some of this blood."*

bovie (n.)

Refers to any electrocautery device used in the operating room to cauterize wounds to staunch bleeding or oozing from capillaries or arterioles. The Bovie machines were the first widely available commercial electrocautery devices.

Ex. *"Nurse, can you hand me the* **bovie,** *I have some bleeding here."*

break (v.)

The process of relieving an acute symptom that is continuous.

Ex. *"The patient has a laryngospasm , so I'm applying some positive pressure to* **break** *the spasm."* **bug**

juice (n.)

Refers to antibiotic solution.

Ex. "I need some **bug juice** to rinse out this wound."

cabbage (n.)

Ex. *" This patient had a* **cabbage** *done 4 years ago."*

A play on phonetic structure of "CABG" which is the abbreviation for coronary artery bypass graft.

cat scan (n.)

Refers to the radiologic technique known as **C**omputerized **A**xial **T**omography. Ex. "*The patient has to go for a* **CAT scan** *first before they come down to the operating room."*

clamp (n., v.)

Refers to a surgical instrument shaped like scissors, however used to compress a blood vessel or other anatomic structure. Common example of such an instrument is a "hemostat"

Ex. (n.) *"Nurse give me a* **clamp***, I have a bleeder."* (v.) *"I'm going to* **clamp** *the aorta."* **close**

(v.)

The act of closing the wound with suture or staples.

Ex. *"We're almost done. We'll* **close** *in about 10 min."*

code (n.,v.)

Ex. (n.) *"There is a* **code** *in progress down the hall. (v.) If this patient's blood pressure goes down he may* **code***." (adj.)*

Refers to a medical emergency in which a designated team responds. Usually involves a cardiac resuscitation for cardiac arrest or irregular rhythm.

Code Blue (n.)

See **"Blue 100"**

crit (n.)

Refers to percentage of red blood cells per 100cc of whole blood sampled from the patient. The term is a shortening of the term hemato**crit**.

Ex. *"The patient has lost 500cc of blood. Let's get a* **crit***."*

Echo (n.)

A shortened term for the word "echocardiogram" which is an ultrasonic evaluation of heart function.

Ex. *"The patient's* **echo** *showed damage to the left ventricle."*

epi (n.)

The term is a shortening of the term **epi**nephrine.

Ex. *The patient's pressure is down. Give them 100 micrograms of* **epi***."*

foley (n.)

A shortened phrase for **Foley** catheter. A tube that is inserted through the urethra to drain the bladder.

Ex. *"The patient had a* **foley** *placed last night."*

fluoro (n. or v.)

A shortened form of **fluoroscope or fluoroscopy.** A form of continuous x-ray for diagnostic and procedural assistance.

Ex. *"they are bringing in a* **flouro (n.)** *to see where the fracture is. They will* **fluoro (v.)** *the leg in two places."*

gas (n.)

Refers to an arterial blood **gas** test.

Ex. *"The patient's lungs sound bad. Let's get a* **gas** *and see what the oxygen level is in his blood."*

glue (n.,v.)

Refers to an adhesive, methylmethacrylate that is used primarily by orthopedic surgeons to fix artificial joints to the supporting bones. This bone(s) is usually the femur and/or tibia. Placement of this substance sometimes has vasoactive effects on the circulation.

Ex. (n.) *"We are putting the* **glue** *into the femoral shaft now."*
Ex. (v.) *"We are going to* **glue** *the artificial hip to the femur now."*

K (n.)

Refers to the serum electrolyte potassium whose chemical symbol is K.

Ex. *"The EKG waveform looks odd. Let's draw some blood and see what the* **K** *is."*

lido (n.)

A shortening of the drug name **lido**caine.

Ex. "*The patient has premature ventricular contractions. Give 100 mg. of* **lido***."*

lines (n.)

Refers to tubing used in intravenous administration and monitoring sets or cables used with physiologic monitors.

Ex. *"Watch how you transfer the patient onto the bed. You may get her* **lines** *tangled."*

lytes (n.)

A shortening of the term electro**lytes** referring to compounds found in the blood serum.

Ex. *"This patient has renal disease. Make sure we get* **lytes** *on him before we induce anesthesia."* **mayo**

(n.)

Refers to an equipment stand used by scrub nurses to hold instruments that can be positioned over the patient.

Ex. *"I'm raising the OR table. Watch your* **mayo***!"*

mics (n.)

The word is pronounced "mikes." This is a shortening of the word **mic**rograms.
Ex. *"Give the patient 100* **mics** *of neosynephrine."*

neo (n.)

Is a shortened form of **neo**synephrine.

Ex. *"Give the patient a 100 mics of* **neo***."*

neuro (n.)

A shortening of the term **neuro**surgery and refers to that surgical specialty.

Ex. "*The* **neuro** *docs haven't evaluated the spine yet."*

orthopods (n.)

Refers to orthopedic surgeons.

Ex. *"The orthopods want this patient positioned on his left side up."*

on/off the pump

Refers to a patient being place or taken off of an extracorporeal bypass machine that is used to bypass the heart and lungs during cardiac surgery.

Ex. *"We'll be going* **on the pump** *in just a couple of minutes."*

penrose (n.)

Refers to a surgical item that is placed in wounds to drain them postoperatively. It is a tubelike device that is very pliable and usually made of latex. It is also used as a tourniquet when starting intravenous lines.

Ex. *"Is there a* **penrose** *on the cart? I need to start an i.v."*

plege solution (n.) *pronounced* "pleeg"

A solution used in cardiac bypass procedures, which is infused into the coronary arteries to disrupt the electrical activity of the heart and induce cardiac arrest. Administered by the perfusionist operating the bypass apparatus.

Ex. *"I have infused 200cc of* **plege solution** *and myocardial temperature is 32.1°."* **relax**

(v., adv.)

Term that usually refers to paralyzing a patient temporarily by using drugs during an operation.

Ex.(v.) *"The surgeon is probably going to want us to* **relax** *the patient for this appendectomy."* Ex
(adv.) *"Use the twitch monitor to see if the patient is* **relaxed***."*

road trip (n.)

Used to define anesthetic procedures done outside the operating room.

Ex. *"We're going on a* **road trip** *to cardiac cath lab for an AICD evaluation."*

roc (n.)

Shortening of the drug **roc**uronium.

Ex. *"I just gave the patient 10 mg. of* **roc** *because the patient moved."*

rod (n., v.)

Used to describe any number of orthopedic devices that primarily are inserted into the shaft of the damaged bone.

Ex. (n.) *" We will use a* **rod** *to repair that fractured femur."*
Ex. (v.) *"We'll be* **rodding** *this femur fracture."*

sat (n.)

Shortening of the term **sat**uration used in blood gas analysis. Saturation refers to the percent of hemoglobin that has oxygen bound to the molecule.

Ex. *"The patient's* **sat** *is only 91%. Let's increase the oxygen going to the patient."* **scope**

(n.,v.)

This term has several meanings. It is a shortening of the drug name **scop**olamine. It also refers to any instrument that is used to visualize internal anatomy, such as a laryngo**scope.** It is also used as a verb in defining an action that uses an instrument to visualize internal anatomy.

Ex. (n.) *"Give the patient .2 mg. of* **scope***."*
Ex. (n.) *"Hand me the* **scope** *so I can intubate this patient."*
Ex. (v) *"I'm going to* **scope** *this patient first and see if we can intubate."*

squirt (v., n.)

Used by surgeons and other physicians that use vascular catheters. Typically a dye solution that is
Ex. (v.) *" I'm going to* **squirt** *the aorta now."*
Ex. (n.) *"The patient had a* **squirt** *that showed a cerebral aneurysm."*

squirter (n.)

A word used to indicate a laceration of a large arterial blood vessel that sends a pulsating stream of blood into the surgical field.

Ex. (n.) *"Nurse, hand me a clamp. I have a* **squirter** *here."*

stat (v.)

An expression that means to do something immediately. Usually follows a request or order.

Ex. (v.) "Give the patient 100 mg. of succinylcholine. STAT!"

stitch (n.,v.)

Used to denote a surgical suture or the act of suturing.

Ex. (n.) *"Don't tie the* **stitch** *too tight or it will break."*
Ex. (v.) *"Let's get this wound* **stitched***."*

Sux (n.)

A shortened form of a drug named **su**ccinylcholine.

Ex. (n.) " Give the patient 100mg. of **Sux**."

Swan (n.,v.)

A shortened form of the name of a monitoring cardiac catheter called a **Swan**-Ganz catheter. Also used as a verb to describe the insertion of the **Swan-**Ganz catheter.

Ex. (n.) " The patient came from the intensive care unit and has a **Swan** in place." Ex. (v.) " The surgeons are going to **Swan** the patient before they bring him to the OR."

wedge (n.,v.)

A term used for the reading acquired from Swan-Ganz catheter after it is properly positioned in the pulmonary artery. It is a term used to describe the positioning of the Swan-Ganz catheter to obtain a reading.

Ex. (n.) " The patient's **wedge** was 15."
Ex. (v.) " The waveform indicates that we have a **wedged** catheter."

Dangerous Abbreviations

Dangerous Abbreviations Or Dose Designations – Not Recommended

Abbreviation /Dose Expression	**Intended Meaning**	**Misinterpretation**	**Correction**
Apothecary symbols AU	dram minim	Misunderstood or misread (symbol for dram misread for "3" and minim misread as "mL").	Use the metric system.
D/C	aurio uterque (each ear)	Mistaken for OU (oculouterque—each eye).	Don't use this abbreviation.
Drug names ARAºA AZT	discharge discontinue	Premature discontinuation of medications when D/C (intended to mean "discharge") has been misinterpreted as "discontinued" when followed by a list of drugs.	Use "discharge" and "discontinue."
CPZ			Use the complete spelling for drug names.
DPT	vidarabine	cytarabineARAºC	
	zidovudine (RETROVIR)	azathioprine	
HCl HCT	COMPAZINE (prochlorperazine)	chlorpromazine	
HCTZ MgSO4	DEMEROL PHENERGAN THORAZINE	diphtheria-pertussis-tetanus (vaccine)	
MSO4 MTX	hydrochloric acid	potassium chloride (The "H" is misinterpreted as "K.")	
TAC	hydrocortisone	hydrochlorothiazide	

	hydrochlorothiazide	hydrocortisone (seen as HCT250 mg)	
	magnesium sulfate	morphine sulfate	
	morphine sulfate	magnesium sulfate	
		mitoxantrone	
	triamcinolone	tetracaine, ADRENALIN,cocaine	

ZnSO4 Stemmed names "Nitro" drip "Norflox" m g o.d. or OD TIW or tiw per os q.d. or QD qn qhs q6PM, etc. q.o.d. or QOD sub q SC	zinc sulfate	morphine sulfate	
	infusion	sodium nitroprusside infusion	
	norfloxacin	NORFLEX	
	microgram	Mistaken for "mg" when handwritten.	Use "mcg."
	once daily	Misinterpreted as "right eye" (OD—oculus dexter)and administration of oral medications in the eye.	Use "daily."
	three times a week.	Mistaken as "three times a day."	Don't use this abbreviation.
	orally	The "os" can be mistaken for "left eye."	Use "PO," "by mouth," or "orally."
	every day	Mistaken as q.i.d., especially if the period after the "q" or the tail of the "q" is misunderstood as an "i."	Use "daily" or "every day."
	nightly or at bedtime	Misinterpreted as "qh" (every hour).	Use "nightly."
	nightly at bedtime	Misread as every hour.	Use "nightly."
	every evening at 6 PM	Misread as every six hours.	Use 6 PM "nightly."
	every other day	Misinterpreted as "q.d." (daily) or "q.i.d. (four times daily) if the "o" is poorly written.	Use "every other day."

U or u IU cc x3d BT ss		s The “q” has been mistaken for “every” (e.g., one heparin dose ordered “sub q 2 hours before surgery” misunderstood as every 2 hours before surgery).	Use “subcut.” or write “subcutaneous.”
		s Mistaken for SL (sublingual).	Use “subcut.” or write “subcutaneous.”
	unit	Read as a zero (0) or a four (4), causing a 10fold overdose or greater (4U seen as “40” or 4u seen as 44”).	“Unit” has no acceptable abbreviation. Use “unit.”
	international unit	Misread as IV (intravenous).	Use “units.”
	cubic centimeters	Misread as “U” (units).	Use “mL.”
		s Mistaken for “three doses.”	Use “for three days.”
	bedtime	Mistaken as “BID” (twice daily).	Use “hs.”
		Mistaken for “55.”	Spell out “sliding

> and < / (slash m Name letters and dose numbers run together (e.g., Inderal40 mg) Zero after decimal point (1.0) No zero before	(insulin) or ½ (apothecary)		scale.” Use “one half” or use “½.”
	greater than and less than	Mistakenly used opposite of intended.	Use “greater than” or “less than.”
	doses or indicates “per”	Misunderstood as the number 1 (“25 unit/10 units” read as “110” units.	Do not use a slash mark to separate doses. Use “per.”
	Inderal 40 mg	Misread as Inderal 140 mg.	Always use space between drug name, dose and unit of measure.
	1 mg	Misread as 10 mg if the decimal point is not se	zeros for doses expressed in whole numbers.

decimal dose (.5 mg)	0.5 mg	Misread as 5 mg.	Always use zero before a decimal when the dose is less than a whole unit.

Anesthesia Apparatus Checkout Recommendations, 1993

This checkout, or a reasonable equivalent, should be conducted before administration of anesthesia. These recommendations are only valid for an anesthesia system that conforms to current and relevant standards and includes an ascending bellows ventilator and at least the following monitors: capnograph, pulse oximeter, oxygen analyzer, respiratory volume monitor (spirometer) and breathing system pressure monitor with high and low pressure alarms. This is a guideline which users are encouraged to modify to accommodate differences in equipment design and variations in local clinical practice. Such local modifications should have appropriate peer review. Users should refer to the operator's manual for the manufacturer's specific procedures and precautions, especially the manufacturer's low pressure leak test (step #5).

Emergency Ventilation Equipment

*** 1. Verify Backup Ventilation Equipment is Available & Functioning**

High Pressure System

*** 2. Check Oxygen Cylinder Supply**
- a. Open $_{02}$ cylinder and verify at least half full (about 1000 psi).
- b. Close cylinder.

*** 3. Check Central Pipeline Supplies**
- a. Check that hoses are connected and pipeline gauges read about 50 psi.

Low Pressure System

*** 4. Check Initial Status of Low Pressure System**
- a. Close flow control valves and turn vaporizers off.
- b. Check fill level and tighten vaporizers' filler caps.

*** 5. Perform Leak Check of Machine Low Pressure System**
- a. Verify that the machine master switch and flow control valves are OFF.
- b. Attach "Suction Bulb" to common Fresh) gas outlet.
- c. Squeeze bulb repeatedly until fully collapsed.
- d. Verify bulb stays *fully* collapsed for at least 10 seconds.
- e. Open one vaporizer at a time and repeat 'c' and 'd' as above.
- f. Remove suction bulb, and reconnect fresh gas hose.

*** 6. Turn On Machine Master Switch**
and all other necessary electrical equipment.

*** 7. Test Flowmeters**
- a. Adjust flow of all gases through their full range, checking for smooth operation of floats and undamaged flowtubes.
- b. Attempt to create a hypoxic $_{02}$/N_20 mixture and verify correct changes in flow and/or alarm.

Scavenging System

*** 8. Adjust and Check Scavenging System**
- a. Ensure proper connections between the scavenging system and both APL (pop-oft) valve and ventilator relief valve.
- b. Adjust waste gas vacuum (if possible).
- c. Fury open APL valve and occlude Y-pTece.
- d. With minimum 0_2 flow, allow scavenger reservoir bag to collapse completely and verify that absorber pressure gauge reads about zero.
- e. With the 0_2 flush activated allow the scavenger reservoir bag to distend fully, and then verify that absorber pressure gauge reads < 10 cm H20.

Breathing System

*** 9. Calibrate 0_2 Monitor**
- a. Ensure monitor reads 21% in room air.
- b. Verify low 0_2 alarm is. enabled and functioning.
- c. Reinstall sensor in circuit and flush breathing system with 0_2.
- d. Verify that monitor now reads greater than 90%.

10. Check Initial Status of Breathing System
- a. Set selector switch to "Bag" mode.
- b. Check that breathing circuit is complete, undamaged and unobstructed.
- c. Verify that C_{02} absorbent is adequate.
- d. Install breathing circuit accessory equipment (e.g. humidifier, PEEP valve) to be used during the case.

11. Perform Leak Check of the Breathing System
- a. Set all gas flows to zero (or minimum).
- b. Close APL (pop-off) valve and occlude Y-piece.
- c. Pressurize breathing system to about 30 cm H_20 with 0_2 flush.
- d. Ensure that pressure remains fixed for at least 10 seconds.
- e. Open APL (Pop-off) valve and ensure that pressure decreases.

Manual and Automatic Ventilation Systems

12. Test Ventilation Systems and Unidirectional Valves
- a. Place a second breathing bag on Y-piece.
- b. Set appropriate ventilator parameters for next patient.
- c. Switch to automatic ventilation (Ventilator) mode.
- d. Fill bellows and breathing bag with 0_2 flush and then turn ventilator ON.
- e. Set 0_2 flow to minimum, other gas flows to zero.
- f. Verify that during inspiration bellows deilvers appropriate tidal volume and that during expiration bellows fills completely.
- g. Set fresh gas flow to about 5 L/min.
- h. Verify that the ventilator bellows and simulated lungs fill and empty appropriately without sustained pressure at end expiration.
- i. Check for proper action of unidirectional valves.
- j. Exercise breathing circuit accessories to ensure proper function.
- k. Turn ventilator OFF and switch to manual ventilation (Bag/APL) mode.
- I. Ventilate manually and assure inflation and deflation of artificial lungs and appropriate feel of system resistance and compliance.
- m. Remove second breathing bag from Y-piece.

Monitors

13. Check, Calibrate and/or Set Alarm Limits of all Monitors

Capnometer Pulse Oximeter
Oxygen Analyzer Respiratory Volume Monitor (Spirometer)
Pressure Monitor with High and Low Airway Alarms

Final Position

14. Check Final Status of Machine
- a. Vaporizers off
- b. AFL valve open
- c. Selector switch to "Bag"
- d. All flowmeters to zero
- e. Patient suction level adequate
- f. Breathing system ready to use

* If an anesthesia provider uses the same machine in successive cases, these steps need not be repeated or may be abbreviated after the initial checkout.

OPERATING ROOM & TABLETOP SETUP PROTOCOL
Nova Southeastern University AA Program

Anesthesia care providers must follow an OR setup protocol which is consistent for all clinical cases. Consistent setups minimize the potential for errors in practice. Every hospital follows a protocol which is unique to that institution. However, there are standards for setup which this program requires its students to uphold. The following protocol is consistent with the accepted standard of care for the majority of the hospitals that you will be rotating with. This protocol WILL be followed by ALL students at ALL rotations and may only be altered if the deviation is discussed with the anesthesia team members prior to actual room setup.

I. Tabletop - The following items should be present on the anesthesia machine tabletop for ALL cases (general anesthesia or MAC) unless specified otherwise.

A. Airway Equipment

1. an appropriately sized and functional **laryngoscope** blade and handle
2. one (1) appropriately sized **endotracheal (ETT) tube** with cuff checked for patency
   a. a **stylet** inserted into the ETT
   b. two (2) **ETTs** (one size below and one size above the chosen size) in the top drawer of the anesthesia machine (formula for pediatric OETT sizes==>[age(y) + 16]/4)
3. a **tongue depressor**
4. two (2) appropriately sized **oral airways**
5. The use of a **precordial stethoscope** is an accepted standard of care and it should be used at all times for **intraoperative monitoring and transport to PACU** unless specifically directed otherwise by a member of the team.

B. Pharmaceuticals

1. Emergency Drugs
   a. syringe labeled ***atropine,*** with drug drawn up
   i. **1cc** syringe for a patient **under 1 year** of age ii. **3 cc** syringe for a patient **over 1 year** of age b. syringe labeled ***succinylcholine,*** with drug drawn up i. **1cc** syringe for a patient **under 1 year** of age
   ii. **3 cc** syringe for a patient **over 1 year** of age but **under 12 years** of age
   iii. **10 cc** syringe for a patient **over 12 years** of age c. one type of ***vasopressor*** drawn up (i.e. Phenylephrine, ephedrine) d. one 5cc syringe of ***2% lidocaine***

2. Induction Agents
   a. one (1) syringe of ***1% propofol*** on table top
   i. **one (20) cc** syringe for patients **over age 5 years** ii. **five (5) cc** syringe for patients **under age 5 years**
3. Maintenance Agents
   a. a vial of a ***non-depolarizing muscle relaxant*** (i.e. rocuronium, vecuronium, cis-atracurium, etc.) with labeled syringe on tabletop but not drawn up unless confirmed by staff
   b. a labeled syringe for ***midazolam***
   c. a labeled syringe for a ***narcotic*** (fentanyl, sufentanil, etc.)

II. <u>The Anesthesia Machine</u> - The following items on the machine should be checked prior to the first case of the day and prior to each subsequent case when appropriate.

A. The availability and integrity of patient **suction** must be verified.

B. Check **O_2 cylinder** supply.

C. Check **O_2 pipeline** supply.

D. Check **vaporizer** fill level.

E. Calibrate **O_2 monitor** sensor to room air.

F. Check **flowmeters**.

G. Install and check the integrity of an appropriately sized **breathing circuit**.

H. Place an appropriately sized **mask** on the circuit.

I. Verify that the **CO_2 absorber** (Baralime) is adequate.

J. Verify the integrity of the **APL (pop-off) valve** and the **scavenging system.**

K. Test the integrity of the **ventilator**.

L. Test the integrity of **monitors** (capnograph, pulse oximeter, ECG, temperature probe, etc.) and position probes and leads for quick placement on the patient.

1. The use of a **precordial stethoscope** is an accepted standard of care and it should be used at all times for **intraoperative monitoring and transport to PACU** unless specifically directed otherwise by a member of the team.

III. <u>Intravenous Therapy</u> - The following items should be set up in the OR prior to the start of each case.

A. Intravenous Fluid

1. **Lactated Ringers** for most healthy patients
2. **0.9% saline** (normal saline) or **5% dextrose in water** (D5W) for renal failure patients
3. fluid choice for neonates as per attending anesthesiologist's request

B. Tubing Setup

1. **60 drop/cc** (minidrip) setup for patients **under ten** (10) years of age 2. **10 drop/cc** (maxidrip) setup for patients **over ten** (10) years of age 3. **stopcock** in-line if a moderate chance of blood transfusion exists 4. **anesthesia extension set** if using stopcock or if IV site is not easily accessible
5. the fluid should be completely **flushed** through the tubing

C. Supply Bin

1. A bin containing the following items should be stocked and in the room prior to the start of each case:

a. at least two (2) of each appropriately sized **IV catheter** b. **1% lidocaine** in a one (1) or a three (3) cc syringe and a 26 g or smaller needle for local infiltration

c. **4" x 4" gauze** sponges for clean up

d. **tape**

e. **alcohol** wipes

f. **18 g needles** for skin hole

g. **tourniquet**

The above list is considered <u>standard</u> and it should be followed exactly unless a change has been discussed with the anesthesia team members. Unauthorized deviation from this protocol will be considered <u>unacceptable</u> and will be managed accordingly.