

## APPENDIX

### Apgar score

A score is given for each sign at one minute and five minutes after the birth. Rarely, if there are serious problems with the baby's condition and the first two scores are low, the test will be scored for a third time at ten minutes after birth. A score of 7-10 is considered normal, while 4-7 might require some resuscitation.

### Apgar scoring

Apgar sign	2	1	0
A-Activity (muscle tone)	Active, spontaneous movement	Arms and legs flexed with little movement	No movement "floppy tone"
P-Pulse (heart rate)	Normal above 100 beats per minute	Below 100 beats per minute	Absent (no pulse)
G-Grimace (responsiveness or reflex irritability)	Pulls away, sneezes or coughs with stimulation	Facial movement only (grimace) with stimulation	Absent (no response to stimulation)
A-Appearance (skin coloration)	Normal color all over (hands and feet are pink)	Normal color (but hands and feet are bluish)	Bluish-gray or pale all over
R-Respiration (rate and effort)	Normal rate and effort	Slow or irregular breathing	Absent (no breathing)

**Clearance (CL)**

CL is the term that describes the efficiency of irreversible elimination of drug from the body. It is defined as the volume of blood cleared of the drug per unit time. Total body clearance includes the elimination of drug that occur in the liver and kidney.

**Elimination rate constant ( $K_e$ )**

$K_e$  is the fraction or percentage of the total amount of drug in the body removed per unit of time and it is a function of clearance and volume of distribution.

**Half-life ( $t_{1/2}$ )**

$t_{1/2}$  is the time taken for the amount of drug in the body (or the plasma concentration) to fall by half.

**Meconium aspiration syndrome (MAS)**

Meconium is the first feces of the newborn. It is sticky and greenish-black in color and may be seen in the amniotic fluid after 34 weeks gestation. Aspiration occurs when the newborn inhales the meconium mixed with amniotic fluid either in the uterus or just after delivery.

**Patent ductus arteriosus (PDA)**

PDA is a condition where the ductus arteriosus (the blood vessel in a fetus that bypasses pulmonary circulation by connecting the pulmonary artery directly to the ascending aorta), fails to close after birth.

**Pharmacokinetics**

The actions of the body on the drug, including absorption, distribution, metabolism and secretion. Elimination of a drug may be achieved by metabolism or by excretion.

**Pneumothorax**

A condition in which air or other gas is present in the cavity of the chest.

### **Premature rupture of the membrane (PROM)**

PROM is an event that occurs during pregnancy when the amniotic membrane containing the developing baby (fetus) and the amniotic fluid bursts or develops a hole prior to the start of labor.

### **Respiratory distress syndrome (RDS)**

Syndrome of severe respiratory failure associated with bilateral pulmonary infiltrates on chest radiograph, impaired oxygenation resulting in a  $\text{PaO}_2$  to fraction of inspired oxygen ratio of less than 200, and absence of elevated pulmonary arterial occlusion pressure of left arterial pressure. Stated another way, RDS is the presence of pulmonary edema in the absence of volume overload or depressed left ventricular function.

### **Transient tachypnea of newborn (TTNB)**

TTNB appears soon after birth accompanied by retractions, expiratory grunting or cyanosis relieved by minimal oxygen. Recovery usually is complete within 3 days. During fetal life, the lungs are expanded with an ultrafiltrate of the fetal serum fluid. During and after birth, this fluid must be removed and replaced with air. Passage through the birth canal squeezes the thorax, which helps eliminate the liquid in the lungs. Pulmonary capillaries and the lymphatics remove the remaining fluid. TTNB occurs when the liquid in the lung is removed slowly or incompletely, which correlates with decreased thoracic birth squeeze or diminished respiratory effort.

### **Volume of distribution ( $V_d$ )**

$V_d$  is one of the major independent pharmacokinetic parameters in addition to clearance. It is not a real value, it is the apparent volume related to the total amount of drug in the body if it were presented throughout the body at the same concentration found in the blood or plasma.

## VITA

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