THE NICU

We understand that having a baby in the **NICU** can be overwhelming and stressful for you and your family. Our goal is to help you navigate this unfamiliar world and make sense of your child's care. These pages are designed to explain common medical terms in a way that's easy to understand. While they don't replace the personal discussions you'll have with your medical team during rounds, they serve as a helpful supplement. Please feel free to ask questions at any time—your understanding is important, and we're here to support you.

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for Children

A

ABO Incompatibility:
a blood condition that may occur when the mother's blood type is O and the baby's blood type is A or B. Can cause a destruction of the red cells resulting in anemia.

Acrocyanosis:
blue coloring of the hands/feet, normal at birth, goes away in a few hours.

Anemia:
low levels of healthy red blood cells in the body.

Anomaly:
any part of the body that is out of the ordinary. Can be visible to the eye or seen on imaging or studies.

Antibiotics:
medicines that help stop the growth of bacteria.

Anticonvulsant: medication that stops or reduces seizures (Phenobarbital, Keppra & Dilantin are commonly used.)

Apnea:
a pause in breathing that lasts more than 20 seconds.

Apnea monitor:
a machine that detects interruptions in breathing.

Artery: blood vessel that carries blood away from the heart to all of the body.

Aspiration: when any substance (i.e. meconium, formula, milk, amniotic fluid) is inhaled into the lungs.

Atelectasis:
a part of the lung has collapsed.

Atria:
the two top chambers of the heart.

Atrial Septal Defect:
a hole between the two top chambers of the heart. Can vary in size.

B

Bacteria:
organisms found on and inside the body. We all have them, but when there is an overgrowth then that leads to infection.

Bagging:
pumping air or oxygen into a baby's lungs by squeezing a bag mask placed over the child's mouth or nose.

Bilirubin:
a breakdown product of red cells. It collects in fatty tissue causing yellowing of the skin.

Birth Defect:
abnormality of structure, function or metabolism present at birth.

Blood gas:
a blood sample used to monitor pH, oxygen and carbon dioxide levels.

Bladder:
the chamber that holds urine before it is expelled from the body.

Blood pressure or BP:
usually taken from your baby's arm or legs.

Bradycardia (Brady):
a decrease or slowing of the heart rate to less than 80 beats/minute.

Breast milk:
human milk as a product of lactation. May be mother's milk or donor breast milk.

Bronchopulmonary dysplasia:
chronic lung disorder common among preterm infants with very low birth weights or prolonged mechanical ventilation.

C

Caffeine:
a medication given to help stimulate the central nervous system, which helps with apnea, but not bradycardia.

Cannula:
a slender tube that sits below the nose, protrudes into the nares to deliver oxygen or air.

Cardiorespiratory monitor:
the machine that tracks your baby's heart rate, the blood pressure, saturations and respiratory rate.

Central Venous Catheter:
line placed in a blood vessel to deliver fluids and medications and draw blood.

Cerebrospinal fluid (CSF):
fluid produced in a section of the brain that circulates around the brain and spinal column.

Cholestasis:
an increase in the direct bilirubin causing a type of liver damage. Usually caused by prolonged inability to feed the infant.

Chorioamnioitis:
an infection of the amniotic fluid and sac.

Chronic Lung Disease or BPD:
the injury or scarring of the sick or preterm infant's lungs resulting in long term need for support.

Colostrum:
breast milk produced in late pregnancy or in the first three to five days after delivery. The milk is usually yellowish in color and rich in nutrients and antibodies to help your baby.

Complete Blood Count (CBC):
a blood test that looks at the number and types of cells in the blood, such as white blood cell, red blood cell, hemoglobin and platlets to name a few.

Congenital:
existing at the time of birth.

Congenital Heart Disease or CHD:
a term used to describe when the structures of the heart are not correctly formed.

Congestive Heart Failure or CHF:
failure of the heart to pump efficiently resulting in fluid accumulation.

Continuous Positive Airway Pressure (CPAP):
a device that helps keep the baby's lungs open and makes it easier for them to breathe on their own; provides continuous flow of air or oxygen.

C-Reactive Protein (CRP):
a screening blood test that shows the level of inflammation in the body.

Computed Tomography:
imaging technique that produces precise pictures of the tissues using radiation.

Cyanosis:
blue coloring of the skin occurring when there is not enough oxygen in the blood.

D

Desaturations:
a decline in your baby's oxygen level less than 88%, occurs frequently in the preterm baby.

Developmental Delay:
can be seen in your baby's ability to walk, talk, run, or achieve any of their gross and/or fine motor skills.

Diuretics:
medicines (Lasix & Diuril) used to help remove excess fluid from the body.

E

Echocardiogram or ECHO:
an ultrasound of the heart to look at the structures and function.

Edema:
a swelling of a part of the body.

Electrocardiogram or EKG:
a record of the electrical activity of the heart detected through adhesive patches on the chest, arms, and legs.

Electroencephalogram or EEG:
a tracing of the electrical impulses of the brain detected through electrodes placed on the scalp. Done at the bedside, usually for 24 hours.

Endotracheal tube or ET tube:
a tube inserted into the baby's airway to assist with breathing and ventilation by delivering air and oxygen to the lungs.

Esophagus:
the muscular tube that carries food from the mouth to the stomach.

Extubation:
the procedure to remove the breathing tube.

Exchange transfusion:
special process used to treat extreme cases of jaundice where some of the baby's blood is removed and replaced with a blood transfusion.

F

Fontanel:
the soft spot between the baby's skull that will later grow together.

G

Gastrostomy tube (G-tube):
a surgically created opening in the abdominal wall into the stomach through which the baby can be fed.

Gastroesophageal reflux (reflux):
occurs when the gastric juice from the stomach backs up into the esophagus. Some may refer to this as 'heartburn' although it does not affect the heart.

Gavage (oral/OG or nasogastric/NG):
a small flexible tube that is inserted into the mouth or nose and goes into the stomach to deliver feeding or remove air.

Gestational Age:
the length of time from conception to birth. A full-term baby is 38-40 weeks gestation.

GI tract:
term used to refer to your baby's stomach & intestines.

Gram:
a measurement of weight used in the NICU to track the baby's weight, order feeds, fluids and medications. 1 kilogram (1000 grams) = 2.2 lbs.

Group B Streptococcus:
bacterial infection that a baby may contract as he/she passes through the birthing canal. It may result in further illness and require treatment with antibiotics.

Grunting:
a sound made by a baby in respiratory distress as it attempts to keep the lungs open.

H

Head Ultrasound:
a test that uses sound waves to create images of the brain.

Heel stick:
to draw blood from the heel of a baby in order to test labs.

Hematocrit:
a lab test that determines the amount of red blood cells in the blood.

Hemoglobin: the component of the red blood cell that carries oxygen.

Hernia:
a protrusion of an organ or structure through the muscle. It is most commonly seen in the inguinal area (groin) or the umbilicus (belly button).

High-frequency ventilation:
a special form of mechanical ventilation that provides rapid respiratory rates from an oscillator or jet ventilator. It is designed to reduce complications to a baby's delicate lungs.

Hydrocephalus:
an excess accumulation of cerebral spinal fluid in the ventricles of the brain resulting in an abnormal expansion of the head.

Hyperalimentation (Hyperal, TPN):
IV fluid that contains complete nutrition and is administered through the veins.

Hypoglycemia:
abnormally low glucose (sugar) levels in the blood, less than 50.

Hyperglycemia:
abnormally high glucose (sugar) levels in the blood, greater than 150.

I

Infiltrates:
a term used to describe the white appearance seen in the lungs on X-ray, usually represents fluid.

Infiltrate:
fluid that accumulates in the surrounding tissue.

Inflammation:
pain redness and swelling possibly caused by infection or injury.

Infusion pump:
medical device that delivers measured amounts of fluid, medicine or feeds to the baby.

Intake & Output (I & O):
how much fluid is given either orally or by IV (intake) and how much comes out in the urine, stool, or other body fluids (output).

Intralipid (lipids):
IV fat solution given to provide total nutrition via the IV.

Intrauterine growth restriction (IUGR):
inadequate growth of the fetus resulting in he/she being smaller than expected for gestational age.

Intraventricular Hemorrhage (IVH):
a collection of blood in and around the ventricles of the brain caused by immature and fragile blood vessels. IVH is graded from 1 to 4, least to most severe.

Intubation: a procedure done to place a small flexible breathing tube into the baby's airway.

In utero: within the womb.

Isolette/incubator: a heat-controlled bed used to maintain a baby's body temperature within normal range.

J

Jaundice (hyperbilirubinemia):
yellow discoloration of the skin and whites of the eyes caused by excess bilirubin. High levels require phototherapy to treat the excess levels.

K

Kangaroo Care:
holding your baby skin-to-skin on a parent's bare chest. It promotes warmth, aids growth, milk production, and bonding with the newborn.

Kidneys: two bean shaped organs in the body that filters waste and excess water from the blood, producing urine.

L

Lactation: production of milk.
The let-down reflex happens when the mother's milk releases into the ducts and to the surface of the nipple.

Large for Gestational Age (LGA):
when a baby's birth weight is above the 90th percentile on the standard growth curve for his or her age.

Late preterm:
a baby born between 34-36 weeks gestation.

Lead wires:
The wires that go from the baby's monitor to the sticky electrode patches placed on their chest.

Low birth weight:
babies born weighing less than 2500 grams.

Lumbar puncture:
a procedure in which a small needle is placed in between the spinal bones to collect spinal fluid for analysis.

M

Magnetic Resonance Imaging (MRI): imaging technique that uses powerful magnets and computers to produce detailed pictures of internal tissues and organs.

Meconium: first bowel movement. It is thick, sticky, and dark green to black in color.

Meconium aspiration syndrome: when the baby's first stool becomes aspirated into the lungs in utero or at the time of birth.

Meningitis: inflammation and/or infection of the membranes that surround the brain and spinal cord.

Meningocele: a birth defect in which a sac filled with spinal fluid protrudes through an opening in the spine.

Microcephaly: a condition that causes the head to be smaller than usual and can indicate abnormal brain growth.

Micro premie: a baby whose birth weight is less than 800 grams.

Murmur: a whooshing sound heard between a normal heartbeat while listening to the chest with a stethoscope.

N

Nasal Cannula: this is a clear plastic tube with soft prongs that is placed in your baby's nostrils and provides oxygen.

Necrotizing Enterocolitis (NEC): an infection of the wall of the intestines, which may spread to the blood. Preterm babies are at high-risk. Surgery may be necessary to remove damaged parts of the intestines, which may lead to feeding intolerance.

Neonatologist: a medical doctor who specializes in the care of newborn and premature infants.

Nephrologist: a medical doctor specializing in diagnosis and treatment of conditions of the kidneys.

Neurologist: a medical doctor specializing in diagnosis and treatment of conditions of the brain, spinal cord or nerves.

Non-Invasive Positive Pressure Ventilation or NIPPV: a method of breathing support that provides pressure, oxygen with a set rate of breaths ventilated into the lungs by nasal cannula.

NPO (nothing by mouth): no medications or nutrients/feeds are to be given by mouth or feeding tube.

O

Occupational Therapist: a health care professional who helps newborns meet developmental skills.

Omphalocele: a condition in which the intestines push through an opening in the abdominal wall.

Ophthalmologist: a medical doctor who specializes in eye and vision care.

Otolaryngologist:
also known as an ENT (ear, nose, and throat) doctor, a healthcare specialist who treats conditions that affect the ears, nose, and throat, as well as head and neck surgery.

Oxygen:
a gas that makes up part of our atmosphere (21%). Medical oxygen is given in a range from 21-100% as needed.

Oximetry: a monitor placed on the baby's hand or foot used to measure oxygen levels.

P

Patent Ductus Arteriosus (PDA):
a congenital heart defect where a fetal blood vessel remains open, causing abnormal blood flow to the lungs. Treatment can range from observation, medication, or surgery.

Periventricular Leukomalacia (PVL):
a cyst formation in the brain tissues around the ventricles in the brain.

Phototherapy (Bili-lights):
a treatment where the infant is placed under bright blue lights or on a blanket, which breaks down bilirubin to a form the body can excrete it.

PICC (percutaneous-inserted central catheter):
a longer IV catheter, the tip can reach a large vein near the heart making these last longer.

PIV (peripheral intravascular vein):
small catheter placed into an arm, leg or scalp to deliver IV fluids.

Platelets:
the blood cells that help to stop bleeding by forming clots.

Pneumonia:
an infection of the lungs that can lead to breathing complications.

Pneumothorax:
air leakage from your baby's lung. This can cause a partial or complete collapse of the lung. If large enough, it may require a chest tube.

Prematurity:
born before 37 weeks gestation.

Prognosis:
what the likely outcome is of your baby's medical condition.

Pulmonary Hypertension or PPHN:
the inability of the blood vessels of the lungs to relax which keeps the lung pressures higher causing lower oxygen levels in the body.

R

Radiant warmer:
an open bed with a heat source that allows immediate access to the infant while maintaining warm temperatures.

Reflux:
backflow of milk and acid from the stomach into the esophagus, which may cause discomfort.

Red blood cells (RBCs):
the part of the blood that contains hemoglobin and carries oxygen to all the cells and tissues of the body.

Respiratory Distress Syndrome (RDS): is a condition that affects the lungs of preterm infants, caused by lack of surfactant. It can be diagnosed by X-ray imaging of the lungs.

Respiratory Syncytial Virus (RSV): a virus/cold seen during cold & flu season; it can make premature infants very ill causing pneumonia.

Retina: the lining of the back of the eye that receives visual images.

Retinopathy of Prematurity (ROP): a disease affecting the blood vessel growth in the retina of the eyes that can cause serious complications.

S

Seizure: an abnormal electrical activity of the brain that may be associated with involuntary muscle movements.

Sepsis: an infection in the body caused by bacteria, viruses, or fungi. Common sites are blood, tissue, urine, spinal fluid, skin, and lungs.

Septic work-up or screening: an assortment of lab blood tests performed to rule out an infection and its source. Antibiotics may be started before the tests have resulted.

Small for Gestational Age (SGA): a birth weight below the 10th percentile on the standard growth curve for an infant's age.

Steroids: medication used to reduce inflammation, primarily in the lungs prior to weaning off a ventilator or oxygen.

Sudden infant death syndrome (SIDS): the sudden, unexplained death of an infant usually less than a year old and seemingly healthy.

Surfactant: a substance produced by the lungs to help keep the air sacs open. Often lacking in premature infants, it is given directly into the lungs to help improve respiratory function.

T

Tachycardia: a fast heart rate greater than 180 beats per minute.

Tachypnea: breathing rate greater than 60 breaths per minute.

Thrombocytopenia: an abnormal decrease in the number of platelets in the blood stream.

Thrush: a fungal infection of the mouth characterized by white patches on the mucous membrane.

TORCH (Toxoplasmosis, Other, Rubella, Cytomegalovirus & Herpes): a group of maternal infections that can cause serious effects on the fetus.

Tracheostomy:
a surgical opening located in the trachea (neck) that allows air to enter the lungs when the throat becomes blocked.

Transfusions: a blood product (PRBCs, platelets, fresh frozen plasma, or cryoprecipitate) is added to your baby's total blood circulation through an IV or catheter.

Transient Tachypnea of the Newborn (TTN):
condition resulting in rapid breathing caused by excess fluid in the lungs immediately following delivery and up to 48 hours of life.

Transpyloric tube: a feeding tube inserted through the nose, down to the stomach into the small intestine to bypass the stomach. Used when feedings are not tolerated in the stomach or severe reflux.

U

Umbilical arterial catheter:
soft catheter placed into the artery of the umbilical cord (belly button/navel) used to monitor blood pressure, collect blood, and give IV fluids and medications.

Umbilical venous catheter:
soft catheter placed into the vein of the umbilical cord (belly button/navel).

Ultrasound (sonogram):
an imaging technique that uses sound waves to create pictures or videos of body tissues and organs.

Upper Respiratory Infections (URIs):
viral or bacterial illnesses in the upper part of respiratory system; affects any part of the respiratory tract above the voice box (i.e., a cold).

Urinary Tract Infection (UTI):
infection of the urinary tract (kidneys, ureters, bladder and/or urethra).

V

Ventilator:
a medical device that attaches to an endotracheal tube (ET) that delivers warm, moist air and/or oxygen to the baby's lungs at a specified rate and pressure to assist with breathing. There are various types of ventilators.

Ventricle:
small chambers, located at the bottom of the heart or in the center of the brain where CSF is made.

Ventricular Septal Defect (VSD):
a hole in the wall between the ventricles (two bottom chambers) of the heart that results in mixing of the blood and impacting oxygenation.

Ventriculoperitoneal (VP) Shunt:
a long-term treatment for hydrocephalus (excess fluid in the brain). The shunt is a narrow plastic tube that is surgically placed in the ventricles of the brain to move excess fluid to the abdomen where it can be absorbed.

W

White Blood Cell (WBC):
one type of cell in the body that helps to fight infection.

Y

Yeast Infection (Candida, Thrush, Monilial diaper rash):
a tiny fungus that can cause infection. Commonly seen following a course of antibiotic treatment.

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