

Medical Terms in the NICU

For parents of NICU infants

This handout defines many of the terms you will hear in the NICU. Please ask a nurse or other staff member to explain more, as needed.

ABD: *Apnea, bradycardia, and desaturation* (see those entries).

Air leak: When air leaks out of the airways or air sacs of the lungs and into the space around them. Two kinds of air leaks are most common in preemies: *pneumothorax* and *pulmonary interstitial emphysema*.

Analgesia: Pain medicine that relieves or decreases awareness of pain. Analgesia does not cause unconsciousness or loss of sensation (numbness).

Anemia: A lower than normal number of red blood cells (see *Hematocrit*). Preemies often have anemia because they are slower to make red blood cells than full-term babies, their blood is drawn often, and some are sick with infections or other illnesses that can make anemia more severe.

Antibiotic: A drug that kills bacteria and is used to treat infection.

Apnea: A pause in breathing. Apnea is common in premature babies because their breathing system is not fully formed. It often begins during the first week of life. When apnea occurs in the NICU, a monitor sounds an alarm. A nurse will know the apnea is happening and will help as needed.

Axillary temperature: Temperature that is taken by placing a thermometer snugly between the baby's chest and the inner upper arm.



Please ask your baby's nurse if you have any questions about medical terms you hear in the NICU.

Bacteria: Tiny, single-cell germs. Some bacteria are helpful, but some can cause infection. To learn more about bacteria, ask your care team.

Bagging: Extra breaths of oxygen the nurse gives to the baby. In bagging, a mask is placed over the baby's nose and mouth. This mask connects either to a device on the wall or to a small rubber bag. The device or bag connects to an oxygen source. If the baby is on a ventilator, extra oxygen breaths may be given through the breathing tube (see *Endotracheal tube*).

Bilirubin (bili): A normal byproduct of the breakdown of red blood cells. If bilirubin gathers in the blood and skin, the skin takes on a yellowish tinge (see *Jaundice*). Bili also refers to the blood test done to determine the level of this substance.

Blood gas: A sample of the baby's blood, taken from an artery (also called "ABG") or a heel (also called "CBG"). It is used to check for acid-base balance, oxygen, and carbon dioxide levels. Blood gas gives us information about the baby's breathing and lungs.

Blood transfusion: A small amount of blood given to the baby through an IV (see *Intravenous tube*).

Bradycardia ("brady"): A short-term slowing of the heart rate. It often occurs with apnea (see *Apnea*). If this occurs, the baby's monitor will sound an alarm. A nurse will know the bradycardia is happening and will help as needed.

Bronchopulmonary dysplasia (BPD): A form of chronic lung disease in newborns, especially preemies who have less mature lungs. It may be caused by the mechanical ventilation and oxygen therapy. Healing of the lungs takes time, and it occurs more slowly if the infant has needed mechanical ventilation or oxygen for more than a few days. Infants with BPD often need extra oxygen during this period of healing.

Caffeine: A medicine given to preemies to decrease apnea (see *Apnea*).

Carbon dioxide (CO₂): A waste product of energy production in the body. Carbon dioxide is removed from the blood as it is exhaled and passes through the lungs.

Care conference: A scheduled meeting at which members of a baby's healthcare team update parents on their baby's health status, talk about changes in the care plan, and explain what improvements they expect. As a parent and advocate for your baby, you can ask for a care conference to review your baby's care plan.

Corrected age: A baby's age figured from the due date, instead of the date of birth. For example, if a baby was born 3 months early and is now 7 months old, the corrected age is 4 months.

Cue: An action or behavior that can show a baby's readiness for and reaction to stimuli. A cue is one way that infants communicate.

Culture: A lab test used to determine whether the baby has an infection. Samples of the baby's blood, urine, and sometimes spinal fluid are sent to the lab and watched for several days to see if any bacteria grow. If bacteria grow, the baby is said to have a *positive* culture. If no bacteria grow, the culture is *negative*.

Cyanosis: A blue color seen in the skin, caused by not having enough oxygen in the blood. Cyanosis often occurs with apnea and bradycardia, or because of poor circulation. It usually does not last long. (See *Apnea* and *Bradycardia*.)

Desaturation (desats): An episode when a baby's oxygen saturation is low. "Desats" are very common in preemies. These drops in oxygen saturation may occur suddenly and last only seconds or minutes, or a desat can last hours, days, or longer. When desats occur, an alarm sounds. A nurse will know the desats are happening and will help as needed.

Distention: An enlargement or swelling, often caused by pressure from the inside.

Diuretic: A medicine that removes excess fluid from the body by increasing urine production.

Echocardiogram (echo): An ultrasound of the heart.

Edema: A gathering of excess fluid in body tissues, that usually causes swelling.

Electrolytes (lytes): Sodium, potassium, chloride, and bicarbonate substances in the cells and bloodstream. Electrolytes are important for nearly all bodily functions.

Endotracheal tube (ET tube): A small plastic tube that goes down a baby's windpipe through either the nose or the mouth. The ET tube is connected to a ventilator and provides extra oxygen to help the baby breathe. The tube is suctioned to remove mucus from the baby's lungs.

Extubate: To remove the ET tube (see *Endotracheal tube*). The care team will decide when a baby is ready for extubation. They will base their decision on how deeply and easily the baby is breathing, how much support the ventilator is providing, and how much oxygen is being used.

Gastroesophageal reflux (GE reflux): When milk or other food in the stomach comes back up into the esophagus.

Gavage: A way to feed babies who are not yet strong enough to feed from bottle or breast. In gavage, a soft plastic tube is placed through the mouth or nose into the stomach. Fluids are poured into the tube and flow into the stomach by gravity.

Hearing test: Screening to see if there is hearing loss. All infants will get their hearing checked before they leave the hospital.

Hematocrit (“crit”): An estimate of the number of red blood cells in the baby’s blood. The baby’s hematocrit often changes daily and may drop as a result of removing blood for tests. If needed, the baby will be given a small transfusion to replace this blood (see *Blood transfusion*).

High blood pressure (hypertension): Blood pressure that is greater than the 90th percentile for a baby’s age (higher than 90 out of 100 babies at that age).

High blood sugar (hyperglycemia): Too much *glucose* (the sugar that cells use for fuel) in the blood.

Intrauterine growth restriction (IUGR): When a baby is very underweight for gestational age. There are 2 forms of IUGR and it can be caused by many different things. If you would like more specific information about your baby, please ask your care provider.

Intravenous tube (IV): A thin tube placed in one of the baby’s veins, often in the hand, foot, or scalp. Fluids and medicines are given through the IV.

Intraventricular hemorrhage (IVH): Bleeding in the *ventricles* (chambers) of the brain. A premature baby’s brain is still developing, and some small blood vessels in and around the lining of the ventricles are very fragile.

Intubate: To insert a small plastic tube through a baby’s mouth and into the windpipe. The tube is connected to a ventilator to supply oxygen and help with breathing (see *Endotracheal tube*).

Jaundice: A yellow color in the skin. It is caused when bilirubin gathers in the blood and skin (see *Bilirubin*). Jaundice is common in newborns.

Large for gestational age (LGA): An infant who is larger in size and weighs more than average for an infant of the same gestational age.

Late preterm baby: A premature baby who is born shortly before term, at 34, 35, or 36 weeks of gestation.

Low blood pressure (*hypotension*): Blood pressure that is too low and does not bring enough blood to all the tissues of the body.

Low blood sugar (*hypoglycemia*): Too little *glucose* (the sugar that cells use for fuel) in the blood.

Magnetic resonance imaging (MRI): A type of scan that uses strong magnets and radio waves to take clear pictures of the inside of the body. MRI does not use radiation.

Medium-chain triglyceride (MCT) oil: An additive for breast milk or formula for premature newborns who are not yet producing certain enzymes and bile salts. MCT oil contains fats that the baby can easily digest and absorb.

Micropreemie: A term sometimes used for the youngest and smallest of premature babies. These babies are often born between 22 weeks and 25 weeks of gestation.

Murmur: A soft “whoosh” sound in the heart that can be heard through a stethoscope. Heart murmur is very common in preemies. (See also *Patent ductus arteriosus*.)

Necrotizing enterocolitis (NEC): An inflammation in the intestines that most often affects preemies. NEC starts when there is an injury to the intestine. This injury may be caused by a lack of blood flow or oxygen, an infection, or large amounts of undigested formula in the bowel. The intestinal lining becomes inflamed, is invaded by bacteria, and stops absorbing gas and food and moving them forward. Symptoms include a swollen abdomen and blood in the stool. If the baby has NEC, an X-ray of the abdomen will show bubbles of gas in the swollen intestinal lining. NEC can be mild or severe.

Neonatal Individualized Developmental Care and Assessment Program (NIDCAP): NIDCAP is a system used by NICU staff to assess an infant’s behavior. They watch the baby carefully to see how much activity, handling, noise, and light the baby can handle without having a decreased oxygen level or becoming upset. Caregiving is then designed to meet the baby’s specific needs.

Non-nutritive sucking: Sucking on a pacifier or a finger, either the baby’s own finger or a caregiver’s. Non-nutritive sucking helps *oral-motor development* (the ability to use the lips, tongue, jaw, and teeth). It may also help digestion and food absorption, and improve weight gain and oxygenation. It does not supply nutrition.

NPO: When the baby is not receiving anything by mouth or gavage (see *Gavage*). Nutrients and water will be provided through an IV (see *Intravenous tube*). NPO comes from the Latin *nil per os*, which means “nothing by mouth.”

Oxygen saturation (“sat”): A measure of how much oxygen is in a baby's blood cells. Oxygen is carried through the body by red blood cells. In the NICU, a baby's “sat” is measured all the time. This is done using a *pulse oximeter* (see “Medical Equipment in the NICU”) around the baby's wrist or foot. The usual goal is to keep oxygen saturation in the high 80s to 90s. If a baby is breathing room air, they may even be saturating at 100%. The baby's current “sat” percentage is the number in blue on their monitor.

Parenteral nutrition: Fluid that contains the vitamins, minerals, and energy the baby needs. Parenteral nutrition is given through an IV. It is started when the baby cannot eat for a long time.

Patent ductus arteriosus (PDA): A *heart murmur* common in premature babies. It occurs when the connection between the pulmonary artery and the aorta either does not close after birth or re-opens after closing. PDA usually repairs itself as the baby matures.

Periodic breathing: A pattern of breathing. The baby may take a few short breaths, a long breath, and then pause before breathing again. This pause is much shorter than the pause that occurs in apnea.

Periventricular leukomalacia (PVL): Cysts near the ventricles in the brain. PVL is a sign that there was some damage to brain tissues.

Pneumothorax: When air leaks into the space between the lung and chest wall, usually because an air sac ruptures. If a lot of air leaks out, it can put pressure on the lung and keep it from expanding. Sometimes a *chest tube* (see “Medical Equipment in the NICU”) is needed to remove air from the chest cavity.

Probiotics: Probiotics are a mixture of live bacteria. When eaten, probiotics support the “good” bacteria naturally found in the intestines of healthy people. These “good” bacteria are needed for normal digestion. Probiotics are sometimes given to the very youngest NICU babies. (See “Probiotics” handout.)

Pulmonary hemorrhage: Bleeding in the lungs.

Pulmonary interstitial emphysema (PIE): Tiny amount of air that has leaked out around the small airways in the lungs. PIE is most common in infants with a low birth weight.

Residual: Food that remains in the stomach from the previous feeding at the time of the next feeding. Large residuals may mean that the baby has *feeding intolerance* (is not digesting well).

Respiratory distress syndrome/hyaline membrane disease (RDS/HMD): RDS/HMD affects many premature babies because their lungs are not fully mature. Babies with RDS/HMD have a hard time exchanging oxygen and carbon dioxide. They often need extra oxygen, help with breathing, or both.

Retinopathy of prematurity (ROP): An overgrowth of the blood vessels of the *retina*, the membrane that lines the inside of the eye. Most babies with ROP do not have vision damage. But, a few babies may lose all or some of their vision in one or both eyes.

Retractions: Indentations in the chest wall when the baby is working hard to breathe.

Room air: The air around us. Room air usually contains about 21% oxygen.

ROP check: A special eye exam to detect retinopathy of prematurity (see *Retinopathy of prematurity*). An ROP check is done on infants who weigh less than 1,500 grams (3 pounds, 5 ounces) at birth, who have received extra oxygen.

Sepsis: An infection in the baby that must be treated with antibiotics.

Small for gestational age (SGA): An infant who is smaller in size and weighs less than average for an infant of the same gestational age.

Suction: Removing mucus from the baby's mouth, nose, or lungs through a soft flexible tube. Premature babies do not cough very well and need help in removing this mucus.

Surfactant: A foamy substance that naturally coats the air sacs of the lungs and helps them stay open. Sometimes when babies are born, they do not have enough surfactant to keep their lungs open. If this happens, doctors may prescribe artificial surfactant to help keep the baby's lungs open. If your care team believes surfactant will help your baby, they will explain how this is done.

Tachycardia: Heart rate that is faster than normal for the baby's age.

Tachypnea: Breathing rate that is faster than normal for the baby's age.

Ultrasound: A diagnostic imaging procedure that uses high-frequency sound waves to take pictures of internal organs.

Urinary tract infection (UTI): An infection of the bladder or kidneys.

X-ray: A diagnostic imaging procedure that uses radiation to take pictures of internal organs.

Vital signs: Vital signs include temperature, heart rate, respiratory rate, and sometimes blood pressure. A baby's vital signs are checked often by the nurse.

Questions?

Your questions are important. Talk with a member of your baby's healthcare team if you have questions or concerns.

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