

APNEA & BRADYCARDIA

SAINT BARNABAS MEDICAL CENTER
NEONATAL INTENSIVE CARE UNIT

What is apnea?

Apnea is when a baby stops breathing for more than 20 seconds. Often when this happens, your baby's color also changes to pale, purplish, or blue and may be especially noticeable around the mouth and lips.

What is bradycardia?

Bradycardia is a slowing of the heart rate, usually to less than 100 beats per minute for a premature baby. Bradycardia often follows apnea or periods of very shallow breathing. Bradycardia is often associated with apnea. You may hear the NICU staff refer to these episodes as **A's and B's**.

What is desaturation?

Desaturation is a decrease in the percentage of oxygen found in the circulating blood supply. The amount of oxygen your baby receives is adjusted to keep the oxygen level in the blood in a set range.

Why do premature babies have apnea?

Premature babies have immature respiratory centers in the brain that sometimes "forget" to tell the baby to breathe. Premature infants normally have bursts of big breaths followed by periods of shallow breathing or pauses. Apnea is most common when a baby is sleeping.

Is all apnea due to prematurity?

No. Apnea of prematurity is the most common cause of apnea in a premature infant. However, apnea can be caused or increased by many factors including infection, low blood sugar, patent ductus arteriosus (PDA), seizures, high or low body temperature, brain injury, or insufficient oxygen.

Will apnea of prematurity go away?

As your baby gets older, his/her breathing will become more regular. Usually apnea of prematurity improves or goes away by the time the baby nears his/her due date.

How is apnea treated?

Several treatments are possible. Your baby may be treated with one or more of the following:

- Medications that stimulate breathing (ie. Caffeine)
- CPAP (continuous positive airway pressure) or Vapotherm
- Mechanical ventilation (breathing machine/respirator)

How do I know if my baby has apnea?

Your baby's respirations are monitored continuously. An alarm will sound if there is no breath for a set number of seconds.

What happens if the alarm sounds?

- A nurse will observe your baby to see if s/he is breathing, if there is a change in their color, and/or if their heart rate is falling. False alarms can be caused by the baby breathing shallow, lying on their stomach, a lead becoming displaced, or being swaddled in blankets
- The nurse may stimulate your baby by rubbing the baby's back or flicking their heel
- If there is a change in your baby's color, the nurse may give your baby extra oxygen
- Often the above steps are all that need to be done, but if your baby still does not breathe, the nurse may give your baby some breaths with a resuscitation bag and mask or extra breaths can be given from mechanical ventilation

Once apnea goes away, will it come back?

No, if the apnea is a result of prematurity. Once a baby matures and the apnea resolves, it will not return. If a baby should have breathing pauses after apnea goes away, it is not apnea of prematurity and it is due to some other factor which needs to be discussed with your baby's doctor.

Is apnea of prematurity related to Sudden Infant Death Syndrome (SIDS)?

No, these are two entirely different problems. Apnea of prematurity does not determine this risk. All babies are at risk for SIDS. Babies who have needed newborn intensive care for any reason are at a slightly higher risk of SIDS than other babies. Once you take baby home, remember to have your baby sleep on his/her back, don't keep any stuffed animals or extra blankets in the crib and use tight fitting sheets.

If you have any further questions, please ask your nurse or doctor.