

## **Respiratory Distress Syndrome (RDS)**

Respiratory Distress Syndrome (RDS) is the most common disease of the lungs that affects premature babies. RDS is also referred to as Hyaline Membrane Disease. The earlier your baby is born, the more likely he/she will have RDS, and the more severe the disease is likely to be. Immaturity of the lungs and a decreased amount of surfactant are the cause of RDS. A chest x-ray confirms the diagnosis.

Surfactant is a soap-like substance that is produced by specialized cells in the lungs. The surfactant production system is not fully developed until about 34 to 36 weeks gestation. Surfactant coats the breathing sacs (alveoli) in the lungs, helping to keep them open as your baby breathes in and out. Without enough surfactant, your baby must use a great deal of energy to re-expand the alveoli with each breath. This tires your baby out, which results in ineffective breathing. Collapse of the alveoli decreases the amount of oxygen available to your baby's body. Lack of oxygen causes some of the lung cells to die. Fluid then leaks into the breathing sacs, causing further damage to your baby's lungs.

Your baby may show signs of RDS moments after delivery, or may develop breathing problems in the first few hours after birth. Your baby's breathing may be rapid or labored. You may notice retractions (pulling of the skin and muscles between the ribs or just below the rib cage). You also may hear grunting or moaning sounds as your baby breathes in and out. Your baby may be dusky (blue color). As your baby tires, breathing becomes less regular, and he may have periods when he stops breathing.

Treatment for RDS has greatly improved with the introduction of artificial surfactant. This "replacement" surfactant is given to your baby through a tube placed into your baby's airway. The surfactant coats the surfaces of the alveoli. Your baby will get a dose soon after birth and may get another dose 12-24 hours later.

Using surfactant does not prevent RDS but does decrease the severity of the disease.

If your baby requires surfactant therapy, we will give you more information on it at that time.

In addition to surfactant, your baby will usually require help with breathing in the form of nasal CPAP or mechanical ventilation. If so, you will receive more information about it.