

Surfactant Replacement

Babies born prematurely sometimes have trouble breathing because their lungs are not fully developed. They often need a breathing machine to help them breath. One reason that they might require the breathing machine is that their lungs are not producing enough surfactant. Not all babies on breathing machines will benefit from surfactant. Your baby's doctor will watch your baby closely to see if he or she might benefit from it.

What is Surfactant

Surfactant is a mixture of lipids and protein that is produced by the lung. It is a soap like lubricating liquid in the lining of the lungs. Surfactant coats the individual breathing sacs (alveoli) within the lung. This coating prevents the air sacs from collapsing when the babies breathe out. This way it is easier for the sacs to fill with oxygen when the baby breathes in. In the same way it is easier to inflate a balloon that is already partially inflated, it is easier to open the sacs within the lung that are coated with surfactant.

How do we give surfactant?

Surfactant is a liquid that is given to the baby through a tube that is placed into the breathing tube. For a short time the baby is taken off of the breathing machine while part of the dose is given. Then the breathing machine is reattached and the baby is positioned so that the surfactant covers as much of the lung as possible.

How many doses will my baby get?

Some babies only need one dose, some get two or three doses. Occasionally, babies may need more than this, often later in his/her course of treatment. It is not necessarily better to get more than one dose. Your baby's doctor will keep watching your baby closely to see if he or she may need more than one dose. Usually, these are given over one or two days. The closest together two doses may be given is six hours.

Are there side effects with surfactant?

Until surfactant spreads over the lung, the babies sometimes need extra oxygen because we placed liquid into their lungs. This is usually only for a very short period of time. Very small babies (less than 2 pounds) may bleed into their lungs after being given surfactant. This is very rare.

Once surfactant is given, we need to monitor the baby very closely. Many times the response to surfactant is very quick and the baby's ventilator settings need to be changed.