

UNDERSTANDING Respiratory Distress Syndrome

RDS



Why is my baby having trouble breathing?

Babies breathe to move air in and out of their bodies. The lungs move oxygen from the air into the blood through tiny sacs called **alveoli**. The alveoli expand when a baby breathes in. They get smaller when a baby breathes out.

The lungs make a substance called **surfactant** (sur-FAK-tant) to help keep the alveoli from collapsing when a baby breathes out. If the alveoli collapse, the baby has to work much harder to open them back up with the next breath.

What is respiratory distress syndrome?

Respiratory distress syndrome, or **RDS**, may occur when a baby does not make enough surfactant. Babies with RDS work hard to breathe every time they take a breath.

RDS symptoms most often occur within the first minutes to a few hours after birth.

They may include:

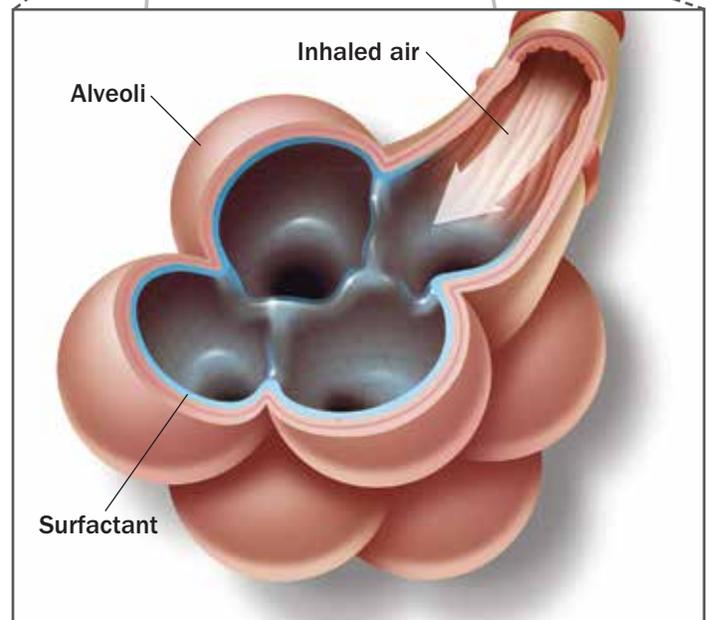
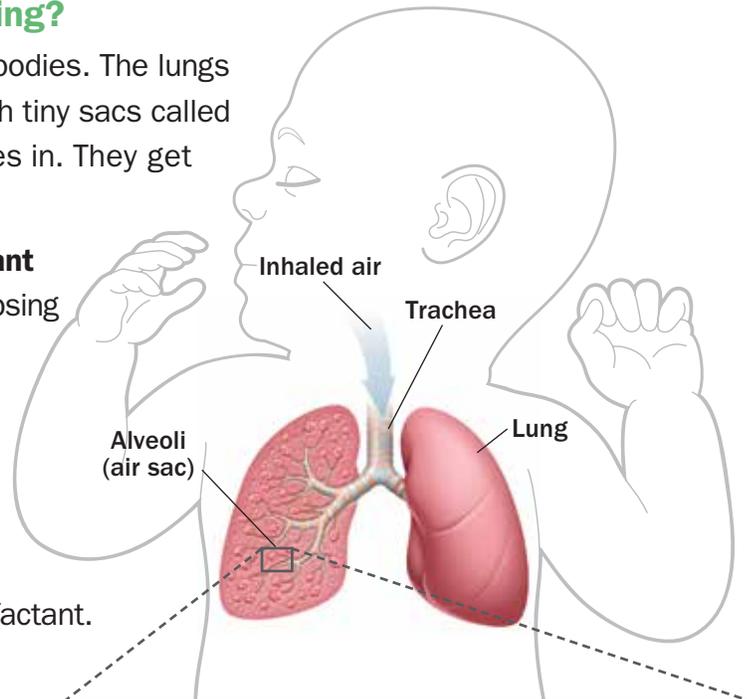
- Rapid, shallow breathing
- Grunting sounds when breathing out
- Flaring of the nostrils when breathing in
- Brief stop in breathing (**apnea**)
- Sharp pulling in of the chest muscles during breathing (**retraction**)

What causes RDS?

The main factor of RDS is prematurity. When babies are born early, their lungs are not fully developed. These babies need help breathing until they are able to make enough lung surfactant on their own.

How common is RDS?

RDS affects about 1 in every 10 premature babies born in the U.S. It is most common in babies born 6 weeks or more before their due dates, but can occur in babies of any age. Almost all premature babies born before 28 weeks of pregnancy have RDS.



HEALTHY ALVEOLI

The lungs make a substance called surfactant. This substance helps keep the alveoli from collapsing when a person breathes out.

Treating Respiratory Distress Syndrome

What treatment will my baby receive?

Treatment will depend on how much help your baby needs to breathe. Possible treatments include:

- Surfactant – a medicine that helps keep the alveoli open so that oxygen can be used
- Extra oxygen – given by nasal cannula (nose tube) or mask:
 - **CPAP (continuous positive airway pressure)** – a treatment that uses mild pressurized air to keep the lungs open
 - **Mechanical ventilator** (in rare cases) – a machine that helps your baby breathe using a tube
- **Antibiotics** – medicines that fight infections

How will I know how my baby is doing?

Your health care team will keep you up-to-date on your baby. They have several ways to measure breathing and lung health, including:

- Vital signs and lab tests
- Settings on the mechanical ventilator – level of breathing support
- **Oxygenation index** – a formula that the health care team uses to measure how well the baby's lungs are working

What will happen next?

Most babies respond well to treatment for RDS. Treatment will continue until the baby's lungs develop and can make enough surfactant. How long this takes depends on how early the baby was born. Talk to the health care team. They can answer any questions you have about your baby.

Glossary

Alveoli – tiny sacs in the lungs that move oxygen from the air into the blood

Antibiotics – medicines that fight infections caused by bacteria

Apnea – a brief stop in breathing

CPAP (continuous positive airway pressure) – a treatment that uses mild pressurized air to keep the lungs open

Mechanical ventilator – a machine that helps your baby breathe by moving air in and out of the lungs

Oxygenation index – formula the health care team uses to measure how well the baby's lungs are working

RDS (respiratory distress syndrome) – when a baby's lungs do not make enough surfactant. This makes it hard to breathe

Retraction – Sharp pulling in of the chest muscles during breathing

Surfactant – a substance that helps keep the alveoli open so that oxygen can be used

Ask the health care team when you have questions—they are there to help.

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NOTES:

Signature: _____ Date: _____ Time: _____