

Check your understanding



1 What is lung surfactant and why can't some babies produce it?

Answer Lung surfactant is a specific mixture of lipids and proteins that helps us breathe by reducing the surface tension in the lungs. Without surfactant the lungs would collapse. Some premature babies don't have fully developed lungs and can't produce surfactant by themselves.

2 What are some of the drawbacks of using animal surfactant to treat respiratory distress syndrome?

Answer Difficult to obtain, difficult to sterilize, expensive and has to be introduced through the windpipe (very invasive).

3 Why do we experiment in lambs (which lack surfactant) and is it ethical?

Answer Animal models are an invaluable source of information for human diseases, treatment, etc. Scientists use animal models because their physiology is very similar to our own. The alternative—using human beings as models—is far from ethical. Moreover, ethical committees monitor every research facility which uses animal models.

4 Why do we measure oxygen levels in blood vessels?

Answer We want to check lung function. The lung's main function is to bring oxygen into the bloodstream so cells can change sugar and fatty acids into energy.