need mechanical ventilation to breathe … Stress… Naumann

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When you breathe normally, your diaphragm and the muscles between ribs create a negative pressure inside the lung. "But when you are undergoing mechanical ventilation, you are creating hydrostatic overpressure. And the forces which are acting during mechanical ventilation are completely different than during normal breathing. And this is probably causing some kind of damage to the cells," Zink explained.

Using lung tissue from fetal and adult rats, the researchers together with collaborators from the Division of Neonatology, University Clinic Leip… stress in a way … ey found that "the fetal lung is much stiffer than the adult lung under deformation," said Naumann.

To determine whether these tension-related changes in the tissue led to alterations in sodium transport, which is important for removing the water from the lungs that is present at birth, the team used electrophysiology to measure the movement of ions across a layer of premature lung cells. They found that changes in pressure affected the activity of two channels involved in sodium transport—the epithelial sodium channel and the sodium potassium ion pump in the cells of lung alveoli. This disruption in the normal function of these transporters could explain why mechanical ventilation has negative effects on the infant's lungs.

"This may be the reason why lung fluid cannot get absorbed that well into the circulation after the preterm births," Naumann explained. He hopes that there will be more research about what