

# Prematurity linked to altered lung function during exercise, high blood pressure in adults

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Advances in medicine have greatly contributed to the survival of extremely preterm infants in the US. However, the picture of long-term health effects related to prematurity is still unclear. Researchers at the University of Oregon compared lung function among adults who were born extremely preterm (at less than 28 weeks), very preterm (at less than 32 weeks), and full term (~39–40 weeks). Steven Laurie, PhD, will present the research team's findings in a poster session on Tuesday, April 29, at the Experimental Biology meeting.

Laurie et al. studied three groups at rest and during [exercise](#): young adults who were born extremely to very preterm and developed a [lung](#) condition called bronchopulmonary dysplasia (BPD), preterm adults who didn't develop BPD (PRE), and full-term adult control subjects (CONT). They found that the PRE subjects had a harder time handling the increased [blood flow](#) from the heart during exercise than the BPD and CONT subjects. The vascular function of the lungs during exercise suggested that the PRE adults may also be at increased risk of developing high lung blood pressure.

From the researchers: "Healthy young humans have lungs designed to easily handle the increased blood flow from the heart during exercise. However, adults born extremely to very preterm have abnormally developed lungs, which may result in lungs that are unable to handle the demands of exercise. Surprisingly, the BPD subjects appear to have lungs that exhibit a normal response and accommodate the increased blood flow during exercise, suggesting a protective role of the oxygen

treatments they received as infants. However, PRE subjects who did not receive the same level of oxygen treatment during their first few weeks of life appear to develop elevated [blood pressure](#) in their lungs during exercise as adults."

Provided by Federation of American Societies for Experimental Biology

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