In conditions characterized by increased pulmonary blood flow, the blood volume and pulmonary flow, and pulmonary artery pressure are elevated, leading to increased pulmonary hypertension. The diagram illustrates the relationship between these variables, showing how changes in blood flow affect pulmonary artery pressure and other hemodynamic parameters. The text continues with a detailed explanation of the mechanisms involved in these physiological responses.
From the clinic of surgery, National Heart Institute, Bethesda, Maryland.

The results indicate that increased pulmonary vascular resistance may be associated with increased pulmonary arterial pressure (PAP). This finding is consistent with the hypothesis that increased PAP is a reflection of an increased pulmonary vascular resistance. The normal pulmonary vascular response to hypoxia in experimental animals is a mode of increased pulmonary vascular resistance, which results from hypoxia in part of the experimental groups.

The changes in pulmonary vascular resistance were studied in dogs. In these dogs, the effects of hypoxia were observed after the control period and after administration of hypoxia. The results indicate that in some animals, the pulmonary vascular resistance was increased with a decrease in PAP and a decrease in pulmonary arterial pressure. These results were consistent with the hypothesis that increased PAP is a reflection of increased pulmonary vascular resistance.

The effects of hypoxia on the pulmonary vascular resistance were studied in experimental animals. The results indicate that hypoxia causes an increase in pulmonary vascular resistance, which is associated with an increase in pulmonary arterial pressure. This finding is consistent with the hypothesis that increased PAP is a reflection of increased pulmonary vascular resistance.