

NIH...Turning Discovery Into Health

Progress in Heart, Lung, and Blood Research

Pulmonary Hypertension

Pulmonary hypertension is a disease in which pressure rises in the arteries that carry oxygen-poor blood from the heart to the lungs. Symptoms include shortness of breath during light physical activity (for example, climbing a flight of stairs), tiredness, chest pain, and a racing heartbeat. As the disease worsens, it can make any physical activity difficult or impossible. Before approval of the first drug to treat pulmonary hypertension in 1995, people with the disease lived an average of fewer than three years after their diagnosis.

Even though there is still no cure for pulmonary hypertension, basic research supported by the National Heart, Lung, and Blood Institute has made a difference. Identifying the molecular pathways underlying pulmonary hypertension enabled the research community to develop new treatments; seven Food and Drug Administration-approved drugs are now available to treat the disease.

Pulmonary hypertension may be more common than once thought. It appears also to affect some of the millions of people who have other lung diseases such as fibrosis and COPD (chronic obstructive pulmonary disease).

The annual number of U.S. hospitalizations attributable to pulmonary hypertension spiked from 1980 to 2002, especially in women. Scientists suspect that the uptick was largely because physicians became more aware of pulmonary hypertension and changed how they diagnose and report it.



NHLBI-supported research continues to sort out pieces of this puzzle. Scientists now have evidence suggesting that pulmonary hypertension is a problem of abnormal cell growth. This could explain why currently available drugs, while improving quality of life, only have a modest effect on disease progression. Continued research on this enigmatic disease could help researchers develop newer, more effective treatments and also help doctors diagnose pulmonary hypertension much earlier, when it can be managed more effectively.

Imagine the Future...

Doctors use miniature imaging tools to scan the lungs for problems before symptoms show up.

Stem-cell therapy delivers replacement tissue to damaged lungs.

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