

31 August 2006

THORAX

Anger and hostility speed up decline in lung power

[Angry breathing: a prospective study of hostility and lung function in the Normative Aging Study Online First Thorax 2006; 10.1136/thx.2005.050971]

Longstanding anger and hostility compromise lung function and hasten the natural decline in lung power that is a normal part of aging, reveals research published ahead of print in Thorax.

The authors base their findings on a study of 670 men, taking part in the long term US Normative Aging Study. Their ages ranged from 45 to 86, but the average age was 62.

Their levels of hostility were measured in 1986, using a validated scoring system. The average hostility score was around 18.5, but ranged from 7 to 37.

After this initial assessment, the men were monitored for an average of eight years, during which their lung function was measured on three separate occasions.

The men's lung function at the start of the study varied according to their initial levels of hostility.

It was significantly poorer among those men deemed to exhibit high levels of anger and hostility compared with those who exhibited medium to low levels.

But it was also worse at each examination throughout the period of study.

Although the impact was lessened, the association held true even after taking account of factors likely to influence the findings, such as smoking and educational attainment.

Higher levels of hostility were also associated with a faster rate of the natural decline in lung function that occurs with aging.

Each point increase in hostility score was associated with a loss of FEV1— the volume of air that can be forced out of the lungs in one second, and a measure of lung power —of 9 ml a year compared with men whose hostility levels were lower.

The authors point out that hostility and anger have been associated with cardiovascular disease, death, and asthma, and that previous research has suggested that changes in mood can have short term effects on the lungs.

Anger and hostility will alter neurological and hormonal processes, which in turn may disturb immune system activity, producing chronic inflammation, suggest the authors.

An accompanying editorial comments that the physiological components of anger and stress overlap, and stress is well known to affect the immune system.

"Indeed it is hard to find a disease for which emotion or stress plays absolutely no part in symptom severity, frequency, or intensity of flare-ups," writes Dr Paul Lehrer of the University of Medicine and Dentistry in New Jersey, USA.



Chronic anger may permanently alter the normal body responses to and physical and psychological stressors, he suggests, and add to “wear and tear.”

But he cautions that associations do not necessarily equate to cause. “Personality, as well as physiology, can change over time, and deterioration in health and physical function can lead to negative emotion as well as vice versa, including for respiratory diseases.”