

COPD tied to tiny brain bleeds

People with chronic obstructive pulmonary disease (COPD) are at increased risk for bleeding in the brain, a new study finds.

Researchers looked at 165 people with COPD and 645 people with normal lung function and found that those with COPD were more likely to have what are called cerebral microbleeds.

The more severe a patient's breathing problems, the more likely they were to have microbleeds, according to the study, published in the *American Journal of Respiratory and Critical Care Medicine*.

Cerebral microbleeds are an indicator of disease in the brain's small blood vessels (cerebral small vessel disease), which is an important cause of age-related mental decline and disability. It was known that people with COPD are at increased risk for large vessel disease, but these new findings 'indicate that COPD might affect both large and small vessels,' said study author Lies Lahousse of Ghent University Hospital in Belgium.

The results also show that methods of preventing cerebral microbleeds in COPD patients need to be developed, Lahousse said. Although the study found a link between having COPD and higher risk of cerebral microbleeds, it did not establish a cause-and-effect relationship.

Asthma: genetic risk research could lead to future test

Research into the genetic risks for asthma could lead to a test which predicts which children will never grow out of it, says a study in the *Lancet*.

Scientists found that those at higher genetic risk of asthma were 36% more likely to develop serious, life-long asthma than those with lower risk. But they said it was too soon to be used as a reliable clinical test.

The study, led by researchers from Duke University in North Carolina, identified 15 separate locations in the human genome which are associated with asthma. Using this knowledge, combined with data from a major New Zealand health study of more than 1000 people since birth, the researchers were able to calculate the genetic risk score for 880 individuals. They then tracked the development and progression of their asthma from early childhood through to their late 30s.

Those with higher genetic risk scores were more likely to have severe asthma which continued into adulthood, and they more often developed problems with lung function. They were also more likely to miss school or work and to be admitted to hospital because of their asthma.

Dr Daniel Belsky, a post-doctoral fellow at the Duke

Institute for Genome Sciences and Policy, said it was too early to talk about a predictive test for severe asthma.

Ducks were bird flu 'melting pot'

Ducks were the melting pot of viruses that led to the new bird flu emerging in China early this year, according to Chinese scientists tracking the evolution of the virus.

The study, published in the journal *Nature*, showed humans were probably then infected with H7N9 due to contact with chickens at live poultry markets.

There have been 133 human cases of the bird flu and 43 deaths.

The team, including researchers at the Shantou University Medical College, were trying to trace the root of the outbreak. They took samples from 1341 chickens, ducks, geese, pigeons, partridges, and quail, as well as faecal and water samples from live poultry markets. By comparing the similarities and differences between the genetic codes of influenza viruses in each of the animals, scientists worked out how the virus evolved and spread.

Mers: deadly coronavirus found in tomb bat

In July, a new respiratory illness, similar to the Sars virus that spread globally in 2003 and killed hundreds of people, was identified and named the Mers (Middle East respiratory syndrome) virus. The World Health Organization (WHO) said it appears 'increasingly' likely that novel coronavirus can be passed between people in close contact.

The deadly Mers has since been isolated in a bat in Saudi Arabia, scientists report.

The virus was detected in a faecal sample taken from an Egyptian tomb bat, collected close to the home of the first known Mers victim.

The research is published in the journal *Emerging Infectious Diseases*.

Bats have been around for millions of years and have picked up a lot of viruses on the way – bats are a source of lots of human virus infections, such as Ebola, henipavirus, rabies, and Sars.

But while scientists found a genetic match, they think it is unlikely that bats are responsible for passing the virus to humans. Instead they think the virus is spreading from the winged mammals to other animals before it is reaching people.

Another piece of research was recently published in the journal *Lancet Infectious Diseases*, which suggested that this intermediary animal could be the dromedary camel. However, only antibodies – the proteins produced to fight infections – were detected in camels, rather than the virus itself, and more work needs to be done to confirm this finding.