

## Sir Richard Doll: A life's research

A 50-year study has provided the most comprehensive picture yet of the perils of smoking.

For half a century eminent scientist Sir Richard Doll has followed smokers to assess just what impact their habit is having on their health.

**BBC News Online profiles the man who first confirmed the link between smoking and lung cancer.**

Fifty years ago, doctors at the UK's Medical Research Council published a scientific paper that was truly groundbreaking.

They revealed that smoking can cause lung cancer. It was the first time the link had been confirmed.

The findings were to change the minds and lives of millions of people around the world.

In 1954, 80% of British adults smoked. Today, that figure is 26%.

Sir Richard Doll was one of the men behind that pioneering study.

He was 41 at the time and had been working in the MRC's Statistical Research Unit since the end of World War II.

### SIR RICHARD DOLL

- **1912:** Born in Hampton, England, on 28 October
- **1937:** Graduated from St Thomas's Hospital Medical School in London
- **1939-45:** Served in the Royal Army Medical Corps
- **1946:** Started work at the Medical Research Council
- **1951:** Co-authored a paper suggesting smoking causes lung cancer
- **1954:** Co-authored a paper confirming the link between smoking and lung cancer
- **1956:** Awarded an OBE
- **1961:** Appointed director of the MRC Statistical Research Unit
- **1969:** Appointed Regius Professor of Medicine at Oxford University
- **1970-71:** Served as vice-president of the Royal Society
- **1971:** Received a knighthood
- **1996:** Made a Companion of Honour for services of national importance
- **July 2005:** Dies after a short illness aged 92

The study was the culmination of years of work, all aimed at trying to find out why so many people were dying from lung cancer.

"Mortality from lung cancer was increasing every year in the first few decades of the last century," said Sir Richard.

"People didn't pay any attention to these mortality rates during the war.

"But in the years that followed, they started to become concerned."

Today, few people dispute that smoking causes cancer. In post-war Britain it was a very different story.

Some scientists had suggested that rising rates of lung cancer may be due to smoking. But tests on animals appeared to rule out a link.

Many researchers, including Sir Richard, started to investigate other potential suspects.

"I personally thought it was tarring of the roads. We knew that there were carcinogens in tar."

Sir Richard and his colleagues interviewed 700 lung cancer patients to try to identify a possible link.

"We asked them every question we could think of," he said.

"It wasn't long before it became clear that cigarette smoking may be to blame. I gave up smoking two-thirds of the way through that study."

The findings were published in 1951. However, it wasn't until the 1954 paper was published that people started to take notice.

"Nobody believed us," said Sir Richard. "They thought there may be other explanations."

### **Historic study**

The MRC researchers continued with their work. This time they enrolled every doctor in the UK in their study.

In 1951, they asked 40,000 doctors if they smoked. Over the course of the next three years, they compared those answers with information about doctors who went on to develop lung cancer. They found a direct link.

The findings prompted the then UK health minister Iain Macleod to call a news conference.

Chain-smoking throughout, he said: "It must be regarded as established that there is a relationship between smoking and cancer of the lung."

The study has provided the foundation for all other research into the impact of smoking cigarettes on health.

It has arguably helped to save millions of lives.

### **GLOBAL RECOGNITION**

- **1962:** UN award for cancer research
- **1974:** New York Academy of Science Presidential Award
- **1981:** Bruce Medal, American College of Physicians
- **1983:** Gold Medal, British Medical Association
- **1986:** Royal Medal from the Royal Society
- 2000: Gold Medal from the European Cancer Society
- **2002:** Norway's King Olaf V award for outstanding work on cancer

Sir Richard's work has been recognised throughout the world.

He has received honorary degrees from 13 universities.

He has won countless awards, including the United Nations Award for Cancer Research in 1962 and the gold medal of the European Cancer Society in 2000.

His achievements have been recognised by the Queen. He was knighted in 1971 and made a Companion of Honour in 1996 for services of national importance.

But among his peers, Sir Richard is known for much more than just his 1954 paper.

Over the course of the past five decades, he has published hundreds of papers on topics as varied as oral contraception, peptic ulcers and electrical power lines.

He has shown that all radiation is potentially harmful, which wasn't always thought to be the case, and that aspirin can protect against heart disease.

He has uncovered evidence to suggest that drinking alcohol increases the risk of breast cancer and that electrical power lines do not cause cancer.

### **Hitting the headlines**

His findings have sometimes sparked controversy. So too has the man.

In 2001, he riled the anti-smoking lobby after appearing to downplay the risks from second-hand smoke.

In an interview on BBC Radio 4's Desert Island Discs, he said: "The effects of other people smoking in my presence is so small it doesn't worry me."

In February 2004, he hit the headlines after saying he would be willing to go to prison because of new rules on medical research.

At 91, Sir Richard remained as busy and as sharp as ever.

In March that year, he took part in the topping-out ceremony for the new Richard Doll Building at Oxford University.

Fittingly, the building will house some of the country's top cancer researchers.

In June 2004, he published further findings from the study he started in 1951.

Some 67 years after graduating from medical school, he was only then for the first time considering retirement.

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<http://news.bbc.co.uk/go/pr/fr/-/2/hi/health/3826939.stm>

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