

## Beans and soya beat lung cancer



Soya beans are a good source of phytoestrogens

### **Mounting evidence suggests eating a diet rich in plant foods such as beans and soya cuts the risk of lung cancer.**

The latest study involving more than 3,000 US people found those who ate more of these foods were less likely to develop lung cancer.

The protective effect, thought to be down to oestrogen-like compounds within the foods, appeared to reduce cancer risk by as much as 46%.

The research appears in the Journal of the American Medical Association.

### **Phytoestrogens**

The University of Texas Anderson Cancer Center researchers compared the diets of 1,674 lung cancer patients and 1,735 people of similar ages and sex who did not have lung cancer.

They used food frequency questionnaires to collect data on intake of 12 individual phytoestrogens - the plant-derived compounds believed to have oestrogenic properties and which have been shown to protect against some tumours in past studies.

**“ It is essential not to forget that nine out of 10 cases of lung cancer and a quarter of all cancer deaths are caused by smoking ”**

Dr Kat Arney of Cancer Research UK

The questionnaires had been completed before the cancer patients had been diagnosed with lung tumours.

Overall, the lung cancer patients tended to eat far less phytoestrogen-containing foods than those without cancer.

Phytoestrogens appeared to cut cancer risk between about 20% and 45% in men and women.

Scientists believe the oestrogen-like compounds act on receptors in the body, which regulate cancer growth.

"These data provide further support for the limited but growing epidemiologic evidence that oestrogen and phytoestrogens are associated with a decrease in risk of lung cancer," they said.

### **Multifactorial**

The findings back those of others who have noticed Asian populations who typically consume large quantities of phytoestrogens have lower rates of lung cancer than other populations.

However, the US team said more research was still needed to explore the link further.

#### **FOODS CONTAINING PHYTOESTROGENS**

Soy products  
Pulses  
Grains  
Vegetables

Dr Kat Arney of Cancer Research UK said: "This research highlights the importance of a healthy diet in preventing cancer, and demonstrates the role that a person's lifestyle plays in the disease.

"Although this study is relatively small, it points towards the potential benefits of plant chemicals in preventing lung cancer.

"However, it is essential not to forget that nine out of 10 cases of lung cancer and a quarter of all cancer deaths are caused by smoking."

She said quitting smoking could significantly reduce a

person's risk of cancer and other diseases, as could following a low fat diet, rich in fruit, vegetables and whole grains.

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## 'Eat more beans' to stop cancer

Beans contain a potent anti-cancer compound

### **A diet rich in beans, nuts and cereals could be a way to prevent cancer, believe UK researchers.**

Scientists at University College London have discovered that these everyday foods contain a potent anti-cancer compound.

This blocks a key enzyme involved in tumour growth, they told *Cancer Research journal*.

The researchers say, in the future, it might be possible to mimic this compound in an anti-cancer drug.

“ **Our study suggests the importance of a diet enriched in foods such as beans, nuts and cereals which could help prevent cancer** ”

Researcher Dr Marco Falasca

Scientists have been exploring the enzyme phosphoinositide 3-kinase as a target for cancer treatment for some time but inhibitors have been difficult to develop because of problems with chemical stability and toxicity.

Dr Marco Falasca and colleagues have discovered that a natural compound, called inositol pentakisphosphate, which is found in most legumes as well as in wheat bran and nuts, blocks the activity of the enzyme.

When they tested its action in mice with ovarian and lung cancer they found it not only blocked tumour growth but also enhanced the effect of other cancer-killing drugs.

In addition, it appeared to be non-toxic, unlike conventional chemotherapy agents.

Dr Falasca said: "Our study suggests the importance of a diet enriched in foods such as beans, nuts and cereals which could help prevent cancer.

"Our work will now focus on establishing whether the phosphate inhibitor can be developed into an anti-cancer agent for human therapy.

**“ The next step is to look at whether inositol pentakisphosphate is able to inhibit tumour growth in cancer patients ”**

Henry Scowcroft of Cancer Research UK

"We believe that inositol pentakisphosphate is a promising anti-cancer tool and we hope to bring it to clinical testing soon."

Henry Scowcroft of Cancer Research UK said: "It is always encouraging when a newly discovered chemical is shown to have anti-cancer activity in the laboratory, especially when it occurs naturally in foods like beans and peas.

"Obviously, the next step is to look at whether inositol pentakisphosphate is able to inhibit tumour growth in cancer patients, in properly controlled clinical trials."

He said researchers were also looking at whether people who eat more lentils, peas and beans are actually at lower risk of developing cancers

"What we do know already is that a diet that includes at least five portions of fruit and vegetables a day can help to reduce the risk of cancer."