

Media article analysis: effects of high protein diet



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Introduction

Media claim from 'The Telegraph' that high ingestion of protein would be 'as bad as smoking 20 cigarettes a day' and 'have as higher risk of developing cancer as smoking 20 cigarettes a day' is misleading and misinterpreting to the readers of general public. The article itself is over simplified making the actual study that the article was based upon, over exaggerated and misleading.

Dangers of reading this claim would suggest eating less foods containing protein in middle-age individuals. Proteins are one of the major components to sustain a healthy lifestyle through all ages. (...) Proteins are large biological molecules consisting of one or more chains of amino acid. Main functions of protein within living organism are to replicate DNA, responding to stimuli, transporting molecules and catalysing metabolic reactions. (...)

Although the alternative claims are found further down the article suggesting it is not as crucial to eat protein rich diet and maintaining healthy diet regardless of age, the article written suggesting that protein rich diet may be as bad as smoking 20 cigarettes a day through developing cancerous cells was written in the first few sentences. This may suggest to the public readers that they might need to change their diet. By posting this statement on the first few paragraphs the reader might only pick out the points that they are interested in and not continuing reading the article where most of the alternative suggestions are made by different professors and doctors.

Describe media claim

' High-protein diet ' as bad as smoking' published by ' The Telegraph' on 14th March 2014, written by Sarah Knapton was published to give the readers the idea of how high protein diet has the same effect of developing cancer as smoking 20 cigarettes a day. Researchers tracked thousands of adults for 20 years and found that consumption of high protein diet may have ' The risk is nearly as high as the danger of developing cancer by smoking 20 cigarettes each day'.

Dr Valter Longo of University of Southern California stated: " we provide convincing evidence that a high-protein diet - particularly if the proteins are derived from animals - is nearly as bad as smoking for your health'. Other comments from Dr Eileen Crimmins stated that with low protein diet the overall mortality longevity may be increased plus increasing an overall prevention of developing cancer in the middle-age individuals. With that in mind another proposition was made that older-aged individuals may need to avoid low-protein diets to allow maintenance of healthy weight and protection from frailty.

In the article it is also stated other perspectives of low and high intakes of proteins. Dr Gunter Kuhnle and Prof Naveed Saattar stated that the results may come from a ' survival bias' plus public view on the article stating: " The smoker thinks: ' why bother quitting smoking if my cheese and ham sandwich is just as bad for me?'"

What is claim based on?

Media has written this claim based up on ' Low Protein Intake Is Associated with a Major Reduction in IGF-1, Cancer, and Overall Mortality in the 65 and
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Younger but Not Older Population' study by several study groups from USA, Italy and Ecuador. The report was published by cell metabolism. The aim was to find if low protein intake associated with reduction in IGF-1, Cancer and overall mortality in adults ages 50 and over.

Recommendations made:

1. Reduction of protein intake may prevent development of cancer cells from 50+ individuals
2. Reduction in red meat intake

What is mechanism/theory to support claim?

Somatomedin C also known as insulin-like growth factor 1(IGF-1), is a protein encoded within humans by the IGF-1 gene, consisting of 70 amino acids in a single chain with three intramolecular disulfide bridges.(...) In 1970's its effects were termed as " nonsuppressible insulin-like activity" (NSILA). It's a hormone that has similar molecular structure compare to insulin.(...) IGF-1 has important roles through childhood growth to adulthood anabolic effects. (...)

Cancer is an abnormal mass, resulted in dividing cells within tissues cell infrastructure. Cancer cells divide and uncontrollably grow, forming malignant tumorous growth, invading close part within the body. (...)

Cancerous cells may also spread through the blood stream or lymphatic system, resulting in invading distant parts within body infrastructure. There are 200 different type of cancers that affect human body, over 60 different organs where cancerous tumours may develop. (...)Some of the tumours within the body are not cancerous, benignit tumours do spread within the <https://assignbuster.com/media-article-analysis-effects-of-high-protein-diet/>

cell but does not infiltrate neighbouring tissues nor do they spread throughout the body.(...)

There are different studies in which ingestion of low protein diet have been found to be of benefit in the mid-age individuals, plus study's that comply of ingestion of high protein may develop cancerous cells or speed up the growth of the tumour through IGF-1. (...) The growth hormone (IGF-1) not only encourages growth of healthy cells, but also provides sources in increasing cancer cell growth. (...) study suggested that increasing 10ng/ml of IGF-1 with the high protein diet have 9% higher chance of developing and dying of cancer compare to low-protein diet. But the proteins that the studies were analysing two-thirds of the protein resurces came from animal produce. When the study was performed on mice, they have found that from animal source proteins tend to have an effect on the growth of cancerous cells, whereas plant derivatives seemed to considered to be more of a ' safer' option. (...)

What evidence is there to support/refute claim?

Many studies were performed on low consumption of proteins and relationship between decreasing the development of cancerous cells. From the Cell metabolism article et al 2014, that this media article was based on suggested that from performing experiments on mice and monitoring human population of 50-65 and 65+ year old groups found that there is a correlation between consumption of high-protein diet and development of cancerous cell. But the article also suggested to look into 65+ year old group as instead of providing low-protein diet may have an opposite effect, promoting

muscular atrophy and weight loss. Moreover, elder generations turn beneficial effects of protein restriction on mortality, into negative.

Another study by Gyrd-Hansen et al 2004 proposed that ' Heat shock protein 70 (Hsp70) promotes cancer cell viability by safeguarding lysosomal integrity'. The study came to a conclusion that Hsp70 has provided a platform for further investigation in alteration in cancerous cells, decreasing stability of lysosomes. So by finding this protein and deplete it from the cancerous cell it will destabilise lysosomal membrane which will then result in cancer cell depletion.

On the other hand study from USA suggested that Mitrogen-activated protein kinase (MAPK) provided strong correlation that inhibitors of signal-regulated kinase (ERK) MAPK will provide effective antiseptic agents for treating wild range of human cancerous cells.(P JRoberts et al 2007)

Summary

The media article did provide some good evidence towards the end from different professors and doctors from both sides supporting the study that high-protein diets may have an effect of cancer development and others saying that more research need to be done to provide more of a valid proposal on high-protein ingestion and development of cancerous cells within the body.

Conclusion

The media article claim was over simplified and suggested false claim at the beginning of the article to the general public. Although the study which this <https://assignbuster.com/media-article-analysis-effects-of-high-protein-diet/>

article was based up on did provide information on low protein intake has effect on reducing the risk of developing cancerous cells, the claim that is made by the newspaper was falsely advertised, misleading general public in thinking that protein foods such as ' meats' may be harmful to their health. But in actual fact proteins have to be a part of healthy lifestyle.