

## Can smoking affect your nutrition?

Written by sdg98ijhADF1

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In 2010, approximately 10 million adults in the UK were smokers and around 60,000 cases of cancer could be attributed to tobacco smoke. Smoking is the leading cause of lung cancer and is the UK's biggest cause of preventable illness and early death (Cancer Research UK). Unfortunately the harmful effects of smoking are not just limited to the lungs as 'the filthy habit' also has a serious detrimental effect on your nutritional status. The links may not be very apparent but long-term smoking can prevent you from utilising vital cancer-fighting nutrients, rob you of precious vitamins and put you at risk of other diet-related illnesses such as osteoporosis.□

### So just what is at stake?□

Firstly, inhaling cigarette smoke introduces a plethora of chemicals into the body with each puff and at least 50 of these chemicals are known to cause cancer such as **benzene**, which is also used as a petrol additive,

#### **formaldehyde**

, which is used to embalm dead bodies,

#### **Ammonia**

, often found in toilet cleaner and the highly addictive

#### **nicotine**

which is often used in insecticides and poisons.

These substances put enormous stress on the body and increase levels of substances known as **free-radicals**. As the name suggests, free-radicals are a tad unruly and, once inside the body, can cause a serious amount of damage to your cells and tissues. Now, your body produces its own free-radicals through the various cellular functions that take place every day and these ordinarily aren't a problem thanks to some house-keeping substances called

#### **anti-oxidants**

which effectively neutralise the free-radicals before they can do any serious damage. Smoking however, increases the level of free-radicals far beyond what the antioxidants can neutralise and this is when we start to see more serious health problems.

Your diet and the foods you eat are your lifeline to a ready supply of antioxidants which can help combat the damage caused by free-radicals and one such antioxidant which goes by another name is **Vitamin C**, or ascorbic acid. Vitamin C plays a critical role in maintaining a strong immune system, helping tissue repair and wound healing and helps you absorb iron from your diet. It also plays a key part in maintaining healthy bones, teeth and gums. If you smoke however, you have a much greater need for vitamin C and its antioxidant powers. The real issue here though is that smoking causes free-radical damage whilst simultaneously robbing the body of the vitamin C needed to neutralise it. In other words, smoking causes the problem AND takes away the solution.

Studies have found that even after taking into consideration how much vitamin c people consume in their diet and other factors which can affect vitamin c levels such as age, gender, ethnicity and alcohol consumption, those who smoke are at a three-fold increased risk of vitamin c deficiency which can lead to poor wound healing, bleeding gums, nosebleeds and lowered resistance to infection.

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The **nicotine** in cigarettes also adversely interacts with another antioxidant vitamin, **vitamin D**. Vitamin D is intimately linked with

### **calcium**

and aids its absorption into your body but nicotine prevents this absorption mechanism from working correctly. This results in too little calcium in your blood which then causes your body to take it from your bones instead leading to soft, brittle or broken bones and a serious condition called osteoporosis. The risk of osteoporosis is further increased if you're a postmenopausal woman and you smoke.

Free radical damage caused by smoking can also lead to DNA damage which in turn can lead to various cancers and is yet another reason to both quit smoking and ensure you are consuming enough antioxidants in your diet.

## **So what, if anything, can you do to prevent these problems?**

Not one to usually state the obvious but this is one occasion where the obvious really needs to be stated! The single best thing you can do to prevent these nutritional problems and lower your risk of developing cancers and other serious illnesses is to stop smoking and "**ditch the cigarettes**"

Prevention really is better than cure and in this instance, quitting smoking really will help prevent these problems from occurring in the first place. Don't believe me? Well, studies have found that in the case of vitamin C for example, your vitamin c levels will return to a healthy level within a year of quitting, as if you'd never smoked. The body has a remarkable ability to recover from the free-radical damage caused by smoking, all you have to do is give it that chance.

Now of course, there's no denying the addictive powers of nicotine and quitting smoking isn't always easy, but there is plenty of help and support out there for you if you're ready to do it - more than you might think. (See the end of this article for some helpful resources).

Whether you want to continue smoking or whilst you're trying to quit there are a few things you can do to try and lessen the negative effects of the smoke on your body.

### **Eat more fruits and vegetables**



Fruits and vegetables are packed with the antioxidants a smokers body desperately needs. If you smoke every day you need to ensure you hit your 5-a-day target consistently to give your body any kind of fighting chance. Try and eat a variety of fruits and vegetables and give special priority to those which are vibrant in colour such as bright orange, dark green, purple, red etc. and if you can exceed your 5-a-day, even better!

### **Increase foods high in Vitamin C**

As we've seen, vitamin C is a crucial antioxidant which gets hit hard by smoking so any attempt to increase it in your diet will help. It's important to remember however that whilst you continue to smoke, your vitamin C levels may never be optimal regardless of how much you consume in your diet. Good sources of vitamin C include:

- Peppers (green, red, yellow, orange)
- Red chilli peppers
- Blackcurrants
- Spring greens

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- Strawberries
- Papaya
- Kiwi fruit
- Red cabbage
- Oranges
- Broccoli (green or purple)

Make sure you don't overcook your vegetables as this will deplete the levels of available vitamins. If possible steam or stir fry instead of boiling. **Consider a vitamin C supplement** A healthy, balanced diet containing a wide variety of fruits and vegetables should usually provide you with enough vitamin C but smoking makes achieving a healthy level incredibly difficult and supplemental vitamin C may be necessary. The current UK reference nutrient intake for vitamin C is 40mg per day and the institute of medicine states a further 35mg per day may be required by those who smoke, however, many scientists and nutritional professionals argue this dose (75mg/day) is very conservative and that much higher doses may be needed. Many studies looking at the effectiveness of vitamin C supplements have safely used a dose of 500mg per day without any adverse effects (bar mild stomach upsets) and indeed this dose is readily sold in pharmacies and health food shops. Taking a vitamin C supplement may also help maintain levels of another antioxidant, vitamin E. If you are considering a vitamin c supplement to help counteract the effects of smoking its best to speak to your GP, dietitian or nutritionist first to ensure you're taking an optimal dose and that your diet is also appropriate.

### **Make sure you're getting enough calcium and vitamin D**

Even though the body's ability to utilise these nutrients is impaired when you smoke it's still incredibly important to ensure you are consuming enough in your diet. There is a slight bonus with vitamin D however as it is of course "The Sunshine Vitamin" and your body can manufacture it when your skin is exposed to the sun so why not go for a brisk walk or run when the sun puts in an appearance and gain the benefits of exercise and vitamin D. For the times when the British sun is absent good dietary sources of vitamin D include kippers, salmon, herring, pilchards, sardines, mackerel, vitamin enriched margarines, bran flakes and eggs. Good sources of calcium include cheese, tofu, sardines (including bones), nori seaweed, almonds, soya beans, yoghurt, milk, chickpeas, kale, spring greens, white cabbage and broccoli.

**Remember a healthy diet will make a huge difference to your health and may help lessen the harmful effects of smoking but the only way to truly combat these nutritional deficiencies and lessen your risk of serious illnesses and cancer is to quit completely.**

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### **Resources:**

Ready to quit? Thinking about it? You're not alone and there's more help available than you might think. Visit the [NHS SMOKE FREE](#) website for a whole host of helpful resources to help you quit including contact details for your local smoke free support groups and participating pharmacies.

**See for yourself:**

- [The influence of smoking on Vitamin C levels in adults, \(Schechtman, Byrd et al., 1989\)](#)
- [Increase in circulating products of lipid peroxidation \(F2-Isoprostanes\) in smokers, \(Morrow, Frei et al., 1995\)](#)

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- [The influence of smoking on vitamin D status and calcium metabolism, \(Brot, Jørgensen & Sørensen, 1999\)](#)
  - [The benefits of vitamin C, \(Zelman, 2012\)](#)
  - [Smoking statistics, \(Cancer Research UK, 2012\)](#)
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