

SMOKING AND YOUR HEART

This is one of the booklets in the CHIKE OKOLI FOUNDATION Heart *Information Series*.

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About this booklet

This booklet is for the general public and people who smoke and who already have coronary heart disease. ('Coronary heart disease' is the term used to describe the gradual narrowing of the inner linings of the coronary arteries, which can lead to angina or a heart attack.)

The booklet:

- explains the risks of continuing to smoke
- offers some advice on how to stop smoking
- describes some of the 'stop smoking aids' that might help you.

It also gives information on the damage that smoking does to your heart and to many other aspects of your health.

This booklet is not a substitute for the advice your doctor or cardiologist (heart specialist) may give you based on his or her knowledge of your condition.

The risks of continuing to smoke

If you have coronary heart disease (if you have angina or have had a heart attack), you probably already know that smoking is bad for your heart, as well as for your lungs. Perhaps you have tried to quit already. But now you have an extra reason to stop smoking, because it is something positive you can do to improve your health and your quality of life. Stopping smoking is the single most important thing a smoker can do to live longer. Even if you already have coronary heart disease, it is definitely worth quitting.

- If you have already had a heart attack, continuing to smoke doubles your risk of having another attack within one year.
- If you are waiting to have heart surgery, your recovery will be quicker if you quit smoking as soon as possible before your operation.

Stopping smoking will help to reduce your risk of having complications – such as a chest infection – after surgery.

- People who continue to smoke have more angina and may have to go into hospital more often. There is no quick and easy way to quit. You have to want to stop smoking.
- This booklet concentrates on ways you can increase your chances of becoming 'smoke-free'.

How stopping smoking will help your heart

CARBON MONOXIDE

Carbon monoxide and nicotine are the two chemicals in tobacco smoke that probably have the most effect on the heart.

Oxygen is carried around the body by red blood cells. The oxygen joins onto haemoglobin – the red protein within the red blood cells. However, the carbon monoxide in cigarette smoke also joins onto the haemoglobin, reducing the amount of oxygen that the blood can carry around the body.

In some smokers, up to half of the blood can be carrying carbon monoxide instead of oxygen. This deprives the heart muscle of vital oxygen.

NICOTINE

Nicotine stimulates the body to produce adrenaline which makes the heart beat faster and raises the blood pressure, causing the heart to work harder. Nicotine also has an effect on the sticky particles in the blood called platelets. This makes the blood more likely to clot.

Other components of cigarette smoke appear to damage the lining of the coronary arteries and this leads to atherosclerosis (the build-up of fatty material within the walls of the arteries).

TAR

It is the tar in cigarettes that causes cancer.

However, if a cigarette is low in tar it does not necessarily mean that it has less nicotine and carbon monoxide. So low-tar cigarettes can be just as harmful to your heart as regular cigarettes. Also, people who smoke low-tar cigarettes tend to compensate by taking more puffs and inhaling more deeply. Research shows that smokers of 'light' or 'mild' brands of cigarettes are likely to inhale as much tar and nicotine as smokers of regular cigarettes. Just three or four extra puffs on a cigarette can change a low-tar cigarette into a regular-strength cigarette.

How can I quit?

Most smokers want to stop smoking and it's the single most important thing a smoker can do to live longer. Seven in every ten current smokers say they would like to stop smoking.

Stopping smoking is not easy. Most of those who stop do so by themselves. Being determined is the vital ingredient.

There is no quick and easy way of stopping smoking and nothing can make you stop. But, if you really want to, there are ways you can increase your chances of becoming smoke-free. The Steps to help you quit smoking below may help. If you need extra help – such as joining a stop-smoking group, getting one-to-one support, or using nicotine patches or gum, or non-nicotine tablets –

Steps to help you quit smoking

1 Prepare for your attempt to quit. You need a lot of willpower to help break the addictive hold of nicotine. Take some time to think about what you would gain from stopping smoking, and what you would lose. If you feel you are likely to gain more than you would lose, now is a good time to quit.

2 Make a date and stick to it. Draw up a plan of action, thinking about what methods are available to you and having them ready before your quit date.

3 Keep busy to help take your mind off cigarettes. Throw away all your ashtrays, lighters and tobacco.

4 Drink plenty of fluids. Keep a glass of water or sugar-free drinks by you and sip it steadily. Try different flavours.

5 Get more active. Walk instead of using the bus or car. Try the stairs instead of the lift. Exercise helps you relax and can boost your morale.

6 Get the support of family and friends. Family and friends can be an important support to help you quit smoking. If they are smokers, you might be able to encourage them to stop smoking with you.

7 Think positively. The withdrawal symptoms you may get when you stop smoking can be unpleasant. But they are a sign that your body is recovering from the effects of tobacco. Irritability, urges to smoke and poor concentration are common. Don't worry. They usually disappear after a few weeks.

8 Change your routine. Try to avoid the shop where you usually buy cigarettes. Perhaps you should avoid the pub or the break-room at work if there are lots of smokers around you. Try doing something totally different.

Surprise yourself!

9 No excuses. Don't use a crisis, or even good news, to be an excuse for 'just one cigarette'. There is no such thing. You will soon want the next and the next.

10 Treat yourself. This is important. If you can, use the money you are saving by not smoking to buy yourself something special – big or small – that you would not usually have.

11 Be careful what you eat. Try not to snack on fatty foods. If you do need to snack, try fruit, raw vegetables or sugar-free gum.

12 Take one day at a time. Each day without a cigarette is good news for your heart, your health, your family ... and your pocket.

Cutting down or stopping outright?

Cutting down is much less likely to work than simply stopping outright. Unfortunately, even if you do manage to cut down, the numbers tend to creep back up again. So once you have planned ahead and chosen your date, it is better to stop outright.

Diet and physical activity

Both of these have an important effect on your body. Stopping smoking is a major change for your body to adapt to, and a healthy diet and regular physical activity suitable to your level of fitness may help your body cope with withdrawal and boost your sense of self-confidence and well-being.

How stopping smoking can reduce the risk of heart attack

From the moment you stop smoking, the risk of heart attack starts to reduce and is halved after one year of stopping smoking.

If you need extra help

If you have tried to quit and have gone back to smoking again, there are other things that can help. These include:

- joining a stop-smoking group

- Products to help you stop smoking
- Alternative therapies such as hypnotherapy or acupuncture.

Stop-smoking groups and one-to-one support

Joining a stop-smoking support group can help you feel less alone in your attempt to quit. Being with other people who are also stopping can give you that all-important mutual support, a sense of being understood and a sense of competition.

Stop-smoking groups are usually run over a period of weeks and take you through the different stages of stopping. Specialist smokers' clinics, using nicotine replacement products or bupropion (Zyban), can double your chances of successfully stopping.

If you don't want to join a group, you may prefer one-to-one support from a trained counselor or nurse.

Products to help you stop smoking

There are many different 'smoking cessation aids' (products to help you stop smoking) on the market.

It is important to check whether the product is safe and effective before you spend your time, energy and money on it. This booklet gives a summary of the products available. You can ask your doctor or pharmacist for advice about the best method for you. If you are not sure if it is safe for you to use a product, check first with your doctor or pharmacist.

Some manufacturers claim very high success rates for their products, promising between 80% and 90% success without much effort. But there is no magic solution. To be certain that a product or method works it has to be put through proper tests, called clinical trials. Not all the products available have been tested in this way.

A smoking cessation aid can't:

- stop you smoking
- Make you want to stop, or
- make it painless and easy.

A smoking cessation aid can:

- ease withdrawal
- boost your confidence and morale, and
- lessen the urge to smoke.

There are two main types of smoking cessation products.

- Licensed products which have undergone clinical trials to prove that they are effective.
- Unlicensed products which have not undergone clinical trials.

Licensed products

These include:

- Nicotine replacement products, which contain nicotine
- Bupropion tablets (Zyban), which do not contain nicotine.

Nicotine replacement products

These methods replace some of the nicotine that you used to get from smoking. It is the addictive nature of nicotine that makes it hard for many people to quit. Nicotine replacement therapy has been well researched and tests have shown that, if used correctly, it can double your chance of success

– which is good news if you found withdrawal very hard before.

If you smoke your first cigarette within 30 minutes of waking, you are particularly likely to benefit from nicotine replacement therapy. Nicotine replacement products are much safer than smoking but if you have, or have had, a heart problem, you must check with your doctor or pharmacist

before starting to use them. It is also important to use the product properly, so always follow the manufacturer's instructions. Ask your pharmacist or doctor if you are not sure. In particular, you must stop smoking completely while taking nicotine replacement therapy. Nicotine replacement products may also affect the action of some drugs such as warfarin and beta-blockers.

There are six forms of nicotine replacement available at the moment:

- patches
- Gum
- Lozenges
- Micro tabs (small tablets, the size of a sweetener that you place under your tongue)
- Nasal sprays, and
- Inhalators.

Your GP may be able to give you a prescription for nicotine replacement. You can also get the products listed above from your pharmacist without a prescription.

The patch gives you a continual supply of nicotine at a low dose while you are wearing it – so you can't respond quickly to a craving or a stressful moment. The gum, lozenges, microtabs, nasal spray and inhalator deliver a higher dose quickly so you can respond to a craving with a 'quick fix'. If you smoke steadily through the day, the patch may suit you better. If you smoke mainly in response to cravings or stress, the gum, lozenges, microtabs, nasal spray or inhalator might be a better choice for you. The nasal spray mimics cigarettes more closely by giving a relatively fast effect. The inhalator may be particularly helpful if you miss the 'hand to mouth' action of smoking.

Possible side effects – Side effects of nicotine replacement products can include feeling sick, indigestion, headache, dizziness and palpitations.

Bupropion tablets (Zyban)

Bupropion was first used to treat depression but clinical trials in the United States have found that it also helps smokers to quit. It appears to work by acting on the pathways in the brain that are responsible for nicotine addiction. It should reduce your desire to smoke and help relieve some of the unpleasant symptoms you get when you stop smoking.

Although bupropion will make it easier to stop smoking, it is not a magic cure. You may still feel urges to smoke or some withdrawal symptoms, and you will have to be prepared to work hard at staying off cigarettes.

When starting bupropion, most people take one tablet a day in the morning for the first six days, and from the seventh day they take one tablet twice a day for the rest of the course. People who have certain medical conditions, or who are going to have certain medical procedures done, may need to take a smaller dose than this. The course usually lasts for eight weeks. You can continue to smoke for the first week while the tablets start to work.

Bupropion should not be used by certain people including women who are pregnant or breastfeeding, people who have fits, or people with eating disorders such as bulimia or anorexia nervosa. Your GP will be able to check if it is OK for you to take it.

It is best not to use bupropion and nicotine replacement products at the same time, as this can cause high blood pressure.

If you need to start taking any new medicines, it is very important that you tell your doctor or Pharmacist first that you are taking bupropion.

Possible side effects – Side effects of bupropion can include a dry mouth, difficulty sleeping and headache. These are usually mild and will pass over time. If you get a skin rash, itching or breathlessness, tell your doctor about it.

The unpleasant facts about smoking

Smoking and your heart

• Smoking is one of the major risk factors for coronary heart disease. (A risk factor is something that increases the chance of getting the disease.) Up to 19 in every 100 deaths from coronary heart disease are associated with smoking. Other risk factors for coronary heart disease are high blood cholesterol, high blood pressure, physical inactivity, overweight and obesity, diabetes and having a family history of coronary heart disease.

It is not only your heart Cigarette smoking has dangerous effects on other parts of the body too.

- Four in every five deaths from lung cancer are caused by smoking.
- Ten in every 100 deaths from stroke are associated with smoking.
- Smoking is associated with cancer of the lungs, larynx, mouth, pancreas, bladder, kidneys, cervix, oesophagus, and the stomach or gut.
- Smoking is the main cause of chronic bronchitis and emphysema.
- Smoking can lead to diseases of the arteries in the legs (peripheral arterial disease) which can also lead to the need for an amputation.

The rising risk

The risk of a heart attack rises with the amount you smoke. In general, people who smoke cigarettes have about twice as great a risk of a heart attack as people who do not. However, this increased risk is particularly large in smokers aged under 50 – their heart attack death rates are up to 10 times greater than non-smokers of the same age. The more you smoke and the younger you started, the greater your risk.

The risks for women

Overall, coronary heart disease is the single most common cause of death in women, although female hormones give some protection to younger women before the menopause. Like men, women who smoke greatly increase their chances of developing coronary heart disease, cancer and chronic bronchitis. Women who take the contraceptive pill and smoke increase their risk of coronary heart disease and stroke. The risk grows even greater when they get older.

Pregnant women who smoke are more likely to have an underweight baby, or have a stillbirth or lose their baby by early death. The children of mothers who smoked during pregnancy are liable to suffer delay in their physical and mental development up to the age of 11.

Passive or second-hand smoking

Passive or second-hand smoking is where non-smokers inhale other people's smoke. It often causes smarting eyes, a sore throat or headaches.

If you suffer from coronary heart disease, breathing in other people's cigarette smoke may be harmful to you. You should avoid breathing in other people's smoke as much as possible.

Passive smoking also increases the risk of lung cancer in non-smokers, as well as causing chest and ear problems in children.

About the CHIKE OKOLI Foundation

The Chike Okoli Foundation is a Nonprofit Organization formed to promote healthy living and entrepreneurial culture. It is named after Chike Edward Okoli, a young Nigerian entrepreneur who died at 25 from undetected cardiovascular disease.

Technical terms

Atherosclerosis: The build-up of fatty material within the walls of the arteries

Bupropion: A tablet to help you stop smoking.

Carbon monoxide: A chemical found in tobacco smoke.

Cessation: Stopping

Clinical trial: A type of controlled research study that tests a treatment or investigation to see how well it works on people.

Coronary heart disease: When the walls of the coronary arteries become narrowed by a gradual build-up of fatty material called atheroma.

Emphysema: Irreversible damage to the lungs.

Nicotine: A chemical found in tobacco smoke.

Nicotine replacement products: Stop-smoking aids which contain nicotine.

Passive smoking(Second-hand smoking): when non-smokers inhale other people's smoke.

Smoking cessation group: A group that helps you to stop smoking.

The CHIKE OKOLI Foundation would like to thank all the GPs, cardiologists and nurses who helped to develop the booklets in the *Heart Information Series*.

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