

After a Myocardial Infarction (Heart Attack)

This leaflet briefly discusses the common advice that applies to most people who have had a myocardial infarction (MI or 'heart attack'). It mainly discusses ways to reduce the risk of further heart problems.

What is a myocardial infarction?

Myocardial infarction (MI) means that part of the heart muscle suddenly loses its blood supply. Without prompt treatment, this can lead to damage to the affected part of the heart. It is usually caused by a blood clot in a heart (coronary) artery which forms over a patch of atheroma (fatty deposit).

Another leaflet called *Myocardial Infarction* discusses MI in more detail.

What can I do to help after having a myocardial infarction?

Following an MI, there are things that you can do to reduce the risk of further heart problems. Everyone is different and individual circumstances will vary. You should discuss with a doctor or nurse what is *best for you*. This leaflet aims to complement any advice that you may receive.

Smoking

If you smoke, giving up smoking is the single most effective way to reduce your risk of having a further MI. The chemicals in cigarette smoke affect the arteries. If you stop smoking, your risk of a further MI is roughly halved compared to the risk if you continue to smoke. Angina pains are also more likely to develop in smokers.

If you find it hard to give up smoking then seek help from your doctor or practice nurse.

Diet

Changes in diet can make a big difference. Studies suggest that people who eat a healthy diet may have up to 50% less chance of a further MI compared to those who don't. A separate leaflet called *Healthy Eating* gives more details. Briefly:

- **Eat at least five portions of a variety of fruit and vegetables** each day. The exact way in which they protect is not clear. They are rich in vitamins, minerals and other chemicals called 'anti-oxidants'. These are thought to protect against a build up of atheroma.
- **Eat less fat.** Diet sheets are commonly available which list foods which are best to eat (ask your practice nurse for one). Briefly, it means reducing the *total fat* content of the diet, and increasing the amounts of carbohydrates and fibre. Also, changing the *type of fat* in the diet by increasing foods with mono and polyunsaturated fatty acids, and reducing foods with saturated fatty acids. In practice this means:
 - THE BULK OF MOST MEALS should be starch-based foods (such as cereals, wholegrain bread, potatoes, rice, pasta), plus fruit and vegetables.
 - NOT MUCH fatty food such as fatty meats, cheeses, full-cream milk, fried food, butter, etc. Use low fat, mono-, or poly-unsaturated spreads.
 - If you eat meat it is best to eat lean meat, or poultry such as chicken.
 - If you do fry, choose a vegetable oil such as sunflower, rapeseed or olive oil
- **Eat oil-rich fish** such as herring, mackerel, sardines, kippers, pilchards, salmon, trout, anchovies, *fresh* tuna, (or take fish oil supplements). There is some evidence to suggest that eating 2-3 portions of oil-rich fish per week reduces the risk of a further MI. It is also without

side effects! It is probably the 'omega-3 fatty acids' in the fish oil that help. These can lower blood fat levels, lower blood pressure, and reduce the 'thickness' of blood. These, and possibly other effects of the fish oil, may reduce the build up of atheroma and the risk of MI.

Alcohol

A little alcohol may help. People who drink 1-2 glasses of wine, or up to a pint of beer, per day have less risk of heart disease compared to those who do not drink at all. It is probably the alcohol rather than anything else in the drink that is the 'active' ingredient. So, a small amount of any alcoholic drink is probably beneficial. The exact way this works is not clear. Alcohol may affect the way atheroma is formed. However, drinking too much alcohol can be harmful.

Men should drink no more than 21 units per week (and no more than 4 units in any one day). Women should drink no more than 14 units per week (and no more than 3 units in any one day). One unit is in about half a pint of normal strength beer, or two thirds of a small glass of wine, or one small pub measure of spirits.

A 'Mediterranean' diet

Eating a Mediterranean style diet is thought to be one of the best ways to reduce the risk of having an MI. This type of diet is, in effect, a summary of the advice above. That is - meals with poultry rather than red meat, lots of pasta and wholegrain breads, and lots of fruit, vegetables, olive oil, oil-rich fish, accompanied by a glass of wine or beer.

Cholesterol

Cholesterol is involved in the formation of atheroma. The dietary measures above will help to lower cholesterol. In addition, most people who have an MI are advised to take a 'statin' medicine to lower the cholesterol level, unless the level is already very low. There are several statin medicines. Statins work by reducing the amount of cholesterol that is made in the liver.

In general, the lower the cholesterol level, the better. Your GP or practice nurse will give you a 'target' cholesterol level to aim for. This is usually for your cholesterol level:

- to come below 5 mmol/l, or
- to be reduced by 20-25% from your original level, whichever is lower.

You will need a blood test before starting a statin, and about 6 weeks later. A blood test every so often may then be advised to keep a check on the your cholesterol level. The dose may be increased until your target level is reached.

Blood Pressure

Have your blood pressure checked regularly. High blood pressure is a major risk factor for heart disease. Normal blood pressure is less than 140/90 mmHg. (However, if you have diabetes you should aim to have a level less than 140/80 mmHg.) Lifestyle changes such as exercise, losing weight, and reducing salt intake help to lower blood pressure. Medication may be advised if it remains high.

Exercise

Regular exercise is advised for most people. A gradual build up to fitness is best. If you are able, a minimum of 30 minutes brisk walking at least 5 times a week is advised. Anything more is even better. Cycling, dancing, jogging, swimming or brisk walking are the common sorts of exercise. The exercise can be spread over the day. (For example, three 10 minute spells of brisk walking, cycling, dancing, etc, per day.)

Before starting regular exercise, get the go-ahead from your doctor as strenuous exercise in certain situations may not be advised.

Weight

If you are overweight then reducing your weight will reduce your risk of a future MI.

What medication is usual?

Medication after an MI is discussed more fully in another leaflet *Medication Following an MI*. Briefly, the following are commonly prescribed.

- Aspirin reduces the 'stickiness' of blood which reduces the risk of blood clots forming.
- Clopidogrel is an alternative to aspirin which helps to prevent blood clots. It is usually used in people who are not able to take aspirin.
- A beta-blocker slows the heart rate and reduces the risk of abnormal heart rhythms.
- An ACE (angiotensin converting inhibitor) reduces the risk of heart failure and further MI.
- A cholesterol lowering medicine (as discussed above).

Every person is different and medication may vary depending on other things such as whether you have complications or other diseases.

Getting back to normal

The time it takes to resume normal life after an MI varies from person to person. It is common to feel tired and have some aches and pains for a week or so. You should begin physical activity gently, but gradually increase over 4-6 weeks. Most people get back to work within 2-3 months. If your work is physically demanding, it may take longer to get back than for a desk job.

Some people worry about resuming sex. For a few weeks it is probably best avoided. If you are able to walk without discomfort, then a return to sexual relationships should not cause any problems. If sex causes angina then tell your doctor.

You can resume car driving after 4-6 weeks provided you have made a satisfactory recovery (and your insurance company is notified). However, if driving causes angina, you should not drive until the angina is well controlled. PSV and HGV rules are stricter and further assessment is required. You can usually resume air travel after 6 weeks.

Cardiac rehabilitation

Following an MI you may be invited to attend a cardiac rehabilitation programme. These are becoming more widespread and are staffed by nurses, physiotherapists, and other health professionals. They aim to provide advice and help on exercise, diet, stress, and other aspects of getting back into full health following an MI. It is also useful to mix with others who are going through the same experience. Studies have shown that cardiac rehabilitation helps to reduce the risk of a future MI, and improves general wellbeing.

Some other general points

- Tell your doctor if you get angina pains following an MI. Further treatment may be needed.
- Tell your doctor if you get breathless, become more tired than usual, or notice swelling of your feet. These symptoms may indicate a degree of 'heart failure' (the heart muscle not pumping as well as normal). This can often be helped with medication.
- Depression and anxiety are common after an MI. This may be due to unfounded worries or other concerns. Again, tell your doctor. Counselling or other help may be appropriate.

Further sources of information and help

British Heart Foundation 14 Fitzhardinge Street, London, W1H 4DH
Heart Information Line: 0845 070 8070 (Mon-Fri 9am-5pm) Web: www.bhf.org.uk

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