Risk Factors For

HEART DISEASE
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Croí is a registered charity based at University Hospital Galway.
This booklet is part of Croí’s ongoing commitment to health education and heart disease & stroke prevention.

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Risk Factors For Heart Disease

The statistics speak for themselves.

Cardiovascular disease (coronary heart disease, stroke and peripheral vascular disease) accounts for more deaths in Ireland than any other single disease.

Cardiovascular Disease is the biggest killer, accounting for a quarter of all deaths.

Although there has been some decline in the number of deaths from cardiovascular disease in Ireland in recent years, there is still plenty of room for improvement!

This booklet aims to highlight the major risk factors associated with coronary heart disease, and it will outline how you can reduce your risk.

A risk factor is anything that raises a person’s chance of developing cardiovascular disease. There are two categories of risk factors, those you cannot change and thankfully, those you can change. Up to 90% of the incidence of heart disease can be prevented through the modification of risk factors such as cholesterol, blood pressure and smoking.

It is important to remember that the more risk factors you have, the more likely it is that you will develop heart disease.
Heart Disease

To understand the risk factors associated with heart disease we must understand the condition.

**What Is Coronary Heart Disease?**
Coronary heart disease is a disease of the coronary arteries that supply the heart muscle with blood and oxygen. Heart disease occurs as a result of the arteries becoming narrowed and a build up of fatty deposits. This narrowing reduces the flow of blood to the heart (which may cause angina) and increases the chance of a blood clot blocking the artery, resulting in a heart attack.

**Angina:**
Angina is the name given to the pain caused by reduced blood supply to your heart. Angina occurs as a result of the narrowing of the coronary arteries. It is usually brought on at times when the heart needs more oxygen e.g. during exercise, after a heavy meal, stress etc. This pain can occur across your chest, arms or jaw.

**A Heart Attack:**
A heart attack occurs when there is complete blockage of one of the coronary arteries. This blockage stops the blood from getting to the heart muscle which it supplies with oxygen and this can cause some damage to the heart muscle. The main symptoms of a heart attack are pain, shortness of breath, nausea and sweating.
Non-Modifiable Risk Factors

RISK FACTORS YOU CAN’T CHANGE:

• Family History
• Gender
• Ethnicity
• Age

FAMILY HISTORY
A history of coronary heart disease in parents and/or brothers and sisters, especially at an early age, increases your risk of developing heart disease.

GENDER
Coronary heart disease affects both men and women. However, men develop coronary heart disease at a younger age, while women develop coronary heart disease at an older age.

ETHNICITY
Some ethnic groups have a higher risk than others of developing coronary heart disease e.g. African-Americans, South Asians.

AGE
The older you are the more likely you are to develop coronary heart disease. Your lifestyle choices will have an impact on how well your heart ages.
Modifiable Risk Factors

RISK FACTORS YOU CAN CHANGE

- Smoking
- High Blood Pressure
- High Cholesterol
- Maintaining a Healthy Weight
- Stress
- Physical Inactivity
- Excessive Alcohol Intake
- Diabetes

SMOKING

Get The Facts
- If you are a smoker the single most important thing you can do for your health is to quit.
- Smoking doubles your risk of developing heart disease.
- Quitting smoking can reduce your risk of developing heart disease by half within one year.
- Smokers are 60% more likely to die from heart disease than non-smokers.
- Passive smoking occurs when non-smokers inhale other people’s smoke. This exposure to second hand smoke is very dangerous and should be avoided.
How Does Smoking Affect The Heart?
• Smoking increases the risk of developing blood clots, which can cause a heart attack.
• Carbon monoxide in cigarette smoke interferes with the oxygen supply to the heart and lungs. When you smoke, your heart has to work harder and is getting less oxygen.

Why Quit?
The risk of heart disease starts to reduce immediately after a person stops smoking. The benefits are immediate:
• Fewer coughs.
• Improved breathing.
• Reduction in the risk of developing smoking related diseases.
• Improved sense of taste.
• “Feel good“ factor.
How To Quit
There are no half measures, your aim must be to stop completely. There are no quick and easy ways to quit, so prepare yourself thoroughly and find out what help is available.

National Smokers’ Quitline 1850 201 203

Tips For Quitting
• Stay positive.
• Ask your GP/Nurse/Pharmacist about Nicotine Replacement Therapy and other available therapies to help with quitting.
• Set a date.
• Tell friends and family that you are quitting, to gain support.
• Make a list of your reasons for quitting.
• Keep active – try and exercise every day.
• Save the money which you would have spent on cigarettes and reward yourself with something nice!
• Most importantly, don’t give up on giving up!
BLOOD PRESSURE

What is Blood Pressure?
Blood pressure is the force which helps blood to flow around the body. Your heart is a pump that beats by contracting and relaxing. When your heart contracts the pressure goes up. When your heart relaxes the pressure goes down.

Blood pressure is recorded as two numbers
• The “systolic” pressure is the pressure exerted on the arteries when the heart is contracting.
• The “diastolic” pressure is the pressure present in the arteries when the heart relaxes.

A consistent blood pressure reading of 140/90 mmHg or higher is considered high blood pressure.

High Blood Pressure
Untreated high blood pressure increases your risk of developing a clot which may result in premature ageing and hardening of the arteries. This in turn puts you at high risk of having a heart attack or stroke.
How Can I Tell If I Have High Blood Pressure?
You may not know that you have high blood pressure, as usually there are no warning signs or symptoms. The only way to know if your blood pressure is high, is to have it checked.

It is important to have your blood pressure checked once a year, especially as you get older and if you have a family history of high blood pressure.

What Can You Do To Help Lower Your Blood Pressure?
It is important to know your own blood pressure and to be aware of what makes it rise and fall.

Tips To Lower Your Blood Pressure
• Give up smoking.
• Maintain a healthy weight by following a healthy eating plan.
• Restrict your salt intake.
• Limit your alcohol intake to recommended levels.
• Become more physically active, take regular exercise (30 minutes or more at least 5 times per week).
• Make relaxation part of your day.
**CHOLESTEROL**

Cholesterol is a fatty substance which is essential for your body to function day to day. A certain amount of cholesterol is healthy as it forms part of the cell walls and is also necessary to make hormones.

The chance of developing coronary heart disease increases with raised cholesterol levels.

**Who Should Have Their Cholesterol Measured?**

High cholesterol levels may not cause any recognisable symptoms. If you have a family history of high cholesterol and/or known coronary heart disease, it is important that you have your cholesterol checked regularly.

**What Is A Healthy Cholesterol Level?**

It is very important to know the recommended target levels for your cholesterol.

<table>
<thead>
<tr>
<th>Cholesterol Type</th>
<th>Target Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cholesterol</td>
<td>Less than 5mmol/L</td>
</tr>
<tr>
<td>LDL (Bad) Cholesterol</td>
<td>Less than 3mmol/L</td>
</tr>
<tr>
<td>HDL (Good) Cholesterol</td>
<td>Greater than 1mmol/L (Males)</td>
</tr>
<tr>
<td></td>
<td>Greater than 1.2mmol/L (Females)</td>
</tr>
<tr>
<td>Triglycerides</td>
<td>Less than 1.7mmol/L</td>
</tr>
</tbody>
</table>
If you have a history of heart disease, stroke or diabetes, your recommended levels will be lower:

<table>
<thead>
<tr>
<th>Total Cholesterol</th>
<th>Less than 4mmol/L</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDL Cholesterol</td>
<td>Less than 2mmol/L</td>
</tr>
</tbody>
</table>

These levels are minimum requirements for a healthy heart, however your doctor may prescribe lower levels.

*These targets are based on the European Guidelines on Cardiovascular Disease Prevention 2007.

**What Causes High Cholesterol?**

**Diet:** A diet that is high in saturated fats, mainly found in fatty meats, full fat dairy produce, lard, dripping, coconut and palm oils, chocolate, biscuits, sauces and puddings, can contribute to elevated cholesterol levels.

**Genetics:** Raised cholesterol levels can run in families. If the inherited cholesterol levels are very high, this is called familial hypercholesterolemia.

**Diseases:** High cholesterol is also connected with diseases such as chronic renal failure, an underactive thyroid gland, alcohol abuse and diabetes.
Practical Tips For Reducing Your Cholesterol Levels

• Eat less fat.
• Eat more high fibre foods like fruit and vegetables.
• Increase the amount of oily fish in your diet.
• Instead of frying – bake, boil, grill, poach, steam.
• If you are overweight, try to reduce your weight.
• Increase your exercise levels.
• Limit your alcohol intake to recommended levels.
• If you have been prescribed cholesterol lowering medicine, you must take it every day.

BEING OVERWEIGHT

Being overweight can lead to an increased risk of developing:

• High Blood Pressure.
• Diabetes.
• Raised Cholesterol.

If you are overweight or have a poor diet, think about your current lifestyle. Where do you need to make changes and how can you do this? Talk to your GP/Nurse about what supports are available to you. It is important that you aim to reach an ideal weight for your height. A healthy diet can reduce the risk of future heart problems.
Recommended Daily Servings from each of the Food Groups

**FRUIT & VEGETABLES**
- 1 serving = small glass of fruit juice;
- 1 med size fresh fruit e.g. apple or banana;
- 3-4 dessert spoons of cooked vegetable or salad including peas or beans.

**FATS - HIGH FAT SUGAR SNACKS, FOODS & DRINKS**
- Use sparingly
- Choose fats high in monounsaturates or polyunsaturates
- Only have small amounts of high fat sugar snacks and drinks, and not too often.

**MEAT, FISH, EGGS & ALTERNATIVES**
- 1 serving = 2 oz cooked lean meat or poultry,
- 3 oz cooked fish;
- 2 eggs;
- 3 oz nuts;
- 2 oz cheese.

**MILK, CHEESE & YOGURT**
- 1 serving = 1/3 pint of milk;
- 1 carton of yogurt;
- 1 oz cheese
- Choose low fat varieties.

**BREAD, CEREALS, & POTATOES**
- 1 serving = 1 bowl of cereal;
- 1 slice of bread;
- 3 dessert spoons of cooked pasta or rice;
- 1 medium, boiled or baked potato.
- Choose high fibre varieties.

**drink water regularly - at least 8 cups a day**

Folic Acid - is essential before and during pregnancy. You can get Folic Acid from green leafy vegetables but if there is any possibility that you could become pregnant then you should be taking a Folic Acid tablet (400mg per day).
Tips For Healthy Eating
• Focus on what you can eat rather than on what you can’t eat.
• People who eat breakfast regularly are more likely to keep their weight stabilised.
• Watch your portion size.
• Eat fish at least twice a week (fresh, frozen or tinned), choosing oily fish on one of those days. Examples of oily fish are salmon, trout, herring, mackerel, fresh tuna or sardines.
• Eat more fruit and vegetables. Aim to eat at least 5 portions a day.
• Avoid adding salt to your food. Substitute salt with herbs, spices, lemon or garlic.
• Fats and oils should be used sparingly.
• Snack wisely, avoid high fat/sugary foods.
• Limit your alcohol intake to recommended levels.

Aim for the following proportions of the different food groups in your overall diet.

Tips For Getting Your Portion Size Right!

• Cook more vegetables than you would normally prepare.
• Put the vegetables on the plate first, so that they take up more than half the plate.
• Then put on the starchy food – e.g. potatoes or rice.
• Add the meat/meat alternative to the plate last.
PHYSICAL INACTIVITY
An active lifestyle can reduce your risk of developing coronary heart disease. The heart, like any other muscle, benefits from being used. Regular exercise means a fitter heart. A fitter heart can pump more blood with each heart beat. This in turn, means the heart does not have to work so hard.

Target 30 minutes or more, moderate intensity aerobic exercise or physical activity, at least 5 times per week

The Benefits Of Exercise
• Strengthens the heart.
• Improves circulation.
• Lowers blood pressure.
• Helps to control weight.
• Reduces stress levels.
• Helps you to relax.
• Gives you a feeling of wellbeing and more energy.

The Golden Rules Of Exercise
• Start gently.
• Build up your exercise gradually.
• Exercise regularly (at least 5 times per week).
• Aim for 30 minutes or more per session.
Tips For Safe Successful Exercising
• Exercise within your own limits – don’t compete with others.
• Try to incorporate some exercise into your daily routine e.g. get off the bus a stop earlier and walk the remainder of the journey.
• Use the stairs instead of the lift.
• For short trips, walk instead of taking the car.
• Avoid heavy meals for 1 - 2 hours before starting exercise.
• Warm up to prepare your muscles before exercising.
• Warm down - slow the pace of your activity for a few minutes and include some gentle stretching at the end of your session.
• Exercise until pleasantly tired but not exhausted.
• The correct level will leave you breathless but not speechless.

DIABETES
Diabetes can significantly increase your risk of developing coronary heart disease.
• Men with diabetes are 2-3 times more likely to develop coronary heart disease.
• Women with diabetes are 4-5 times more likely to develop coronary heart disease.

Therefore, people with diabetes must pay particular attention to the management of cardiac risk factors and good blood sugar control. Small improvements in blood glucose can greatly reduce their risk of developing cardiovascular disease.
You Can Control Your Diabetes By.
• Taking your medications as prescribed.
• Exercising regularly.
• Quitting smoking.
• Following a healthy eating plan.
• Having your blood pressure, cholesterol and blood glucose level checked regularly.

STRESS
High levels of stress can affect your health, so it is important to learn how to recognise and manage stress.

Stress is caused by anything that makes you feel tense, anxious, angry, frustrated or unhappy. It is difficult to avoid stressful situations entirely, therefore we need to develop methods of dealing with stress when it happens.

Long Term Tips For Dealing With Stress
• Lead a balanced life – identify the things you enjoy and that are important to you.
• Exercise regularly.
• Follow a healthy eating plan
• Get a good night’s sleep.
• Cut down on alcohol, smoking and caffeine.
• Avoid conflict.
• Accept yourself – it is human to make mistakes.
• Learn to accept what you cannot change.
• Plan ahead – avoid putting too much pressure on yourself.
• Don’t bite off more than you can chew – it’s ok to say no!
• Be proactive – seek support.
• Find time for family and friends.

**Develop Relaxation Skills**

Imagine your favourite scene. Look into the scene and ask yourself the following questions. After each reflection, pause for 10-15 seconds.

*(You may like to do this with soft background music).*

What is the temperature at the scene?
Who is there?
What colours are present in your scene?
What sounds are present in your scene?
What movement is occurring?
How are you feeling?

*Unwind slowly from your scene.*
ALCOHOL

You should spread your alcohol intake over the week, keep some days alcohol free and do not drink more than the recommended safe limits: for men 21 standard drinks a week, for women 14 standard drinks a week.

1 standard drink

= one half pint of beer, stout or lager

= one Irish pub measure of spirits (whiskey, vodka or gin)

= one small glass of wine (100ml)

Excessive Alcohol Consumption Can Increase Your Risk Of Developing:

• Heart muscle disease.
• Abnormal heart rhythms.
• High blood pressure and strokes.
• Weight problems.
• Liver disease.

There is not enough evidence to support the protective benefits of alcohol for the heart. If you are a non-drinker there is no need to start!
For more information on how to maintain a healthy lifestyle please visit our website [www.croi.ie](http://www.croi.ie) or see Croí’s other educational publications

- Cholesterol “Get the Facts”
- The Balanced Guide to Healthy Eating
- Health Benefits Of Quitting Smoking
- Take Control of Your Blood Pressure Booklet
- Advice for Patients on Heart Medications
- Safe Heart Card

*This booklet has been designed to help you understand the risk factors associated with cardiovascular disease and is not intended to replace the medical advice of your doctor.*
Croí is a registered Irish charity, funded entirely by voluntary contributions. Since it’s inception in 1985, the foundation has contributed significantly to the fight against heart disease & stroke in the West of Ireland.

Our Mission is to reduce the impact of cardiovascular disease on families living in the West of Ireland.

Our Aim is to play a leading role in ensuring that the people of the West of Ireland receive the highest attainable level of cardiovascular healthcare, based on best international standards.

Croí pursues this aim by supporting and developing initiatives across all areas of cardiac care, including in-hospital patient care, interventional cardiology, heart failure and other specialised clinics, cardiac surgery, patient care in the community, family support, disease prevention, community education and cardiovascular research.

Croí is a registered Irish charity (CHY 7500) dedicated to the fight against heart disease & stroke. All activities are funded entirely from the proceeds of fundraising events, voluntary contributions, donations and philanthropic support.

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