



The St Vincent's
Screening TO Prevent Heart Failure
(STOP-HF)

STOP-HF Screening Programme

Guiding you toward preventing heart failure

Predict, Protect, Prevent

www.heartbeat-trust.ie
www.STOPHF.ie

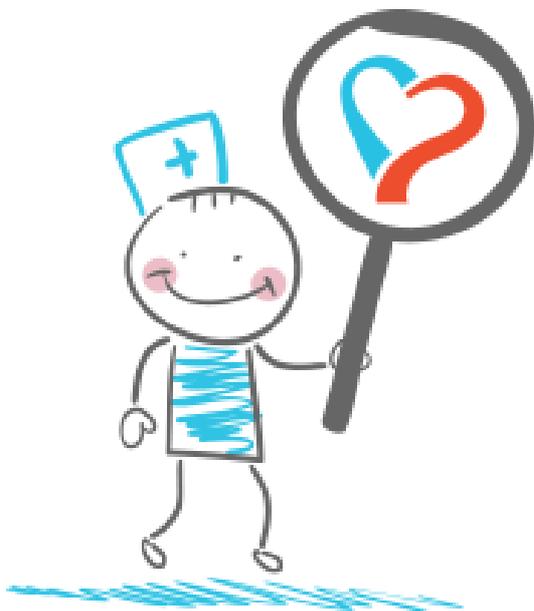


For further information, please call: 01 2713071 and ask to speak to a STOPHF nurse



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STOP-HF SCREENING PROGRAMME

Background

The STOP-HF Screening Programme started in 2004 as a research study. The main aim was to see if people with risk factors for heart failure could have their risk defined by the use of a blood test known as B-Type Natriuretic Peptide (BNP). BNP is a protein that is released from the heart when it is under stress or strain.

People over the age of 40 with risk factors for developing heart failure were invited to partake in the study.

Risk factors such as;

- **Known high blood pressure**
- **Known high cholesterol**
- **Known diabetes**
- **Known coronary artery disease**
- **Known arrhythmia**
- **Known heart valve disorders**
- **Known peripheral vascular disease**
- **Known angina**
- **Known left ventricular hypertrophy**
- **History of myocardial infarction**
- **History cerebral vascular accident**
- **History of transient ischaemic attack**

Participants consented to take part. All participants remained under the care of their GP and any other doctors they were seeing. Those whose BNP result was greater than 50pg/ml were reviewed by a consultant cardiologist and the principle investigator. All participants received lifestyle coaching from a STOPHF nurse.

STOP-HF SCREENING PROGRAMME

In 2012, data from the study was analysed. The study was shown to reduce not just heart failure but all cardiovascular events by 40%. Results were also shown to be cost effective. The study was published in the high profile medical journal JAMA (the most widely circulated medical journal in the world) and was awarded research paper of the year by the Royal College of General Practitioners. Recently STOPHF has been adopted into international guidelines and is impacting the way care is delivered globally.

Present day

STOPHF is now a routine clinical service supported by the Heartbeat Trust. All participants get the same care and follow up dependent on NP risk and risk status.

Participants are now reviewed based on the NP levels and risk status.

Satisfactory: 3 yearly review

Medium: 2 yearly review

High: 1 yearly review

After the assessment, the nurse and doctor review the visit and all test results. If there are any concerns the patient will be asked to come in to the hospital to be reviewed by a doctor and have further investigations if necessary. Automatically whether the participant is seen by a doctor or not a letter with all investigation results are sent to their GP.

NP levels fall into three different categories of risk. NP values are dependent on the test used to measure the levels (NTproBNP or BNP).

Level	NTproBNP	BNP	Reviewed Every
Satisfactory	<125	<20	3 Year
Medium	126-250	21-50	2 Year
High	>250	>50	1 Year

Participants are requested to sign a consent form so we can continue medical research on blood samples.

NATRIURETIC PEPTIDE

What is natriuretic peptide?

In the STOP-HF Programme, the main blood test is called natriuretic peptide. Natriuretic peptide can be tested using either BNP and NT-proBNP.

BNP and NT-proBNP are produced in the heart and released when the heart is stretched and working hard to pump blood.

Higher-than-normal results suggest that a person has some degree of heart damage, and the level of BNP or NT-proBNP in the blood is related to severity. Normal results if experiencing other symptoms indicate that the person's symptoms are likely to be due to something other than heart failure.

NP Levels fall into three categories;

Satisfactory

Medium

High

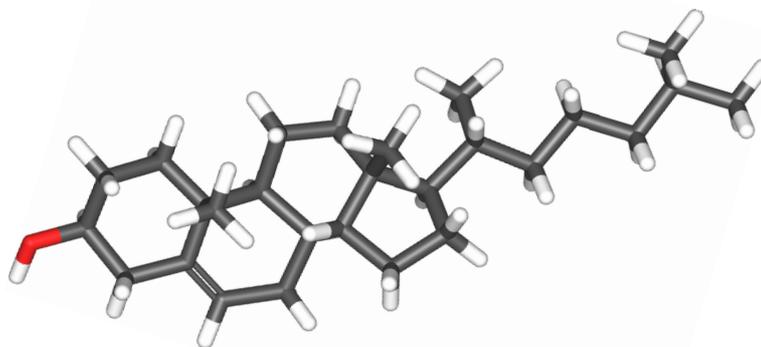


LIPIDS

Another blood sample taken, looks at the level of lipids in the blood. The particles measured with a lipid profile are classified by their density into high-density lipoproteins (HDL), low-density lipoproteins (LDL), and triglycerides. Total cholesterol is also measured.

Lipids are a group of fats and fat-like substances. Cholesterol is found naturally in our bodies and is needed to function properly. Every cell in our bodies contains cholesterol. It is also found in the food we eat. The cholesterol we take in via food is absorbed into the bloodstream through the stomach and circulates through the blood stream. A lipid profile measures the level of specific lipids in the blood. Monitoring and maintaining healthy levels of these lipids is important in staying healthy.

There are many factors which can change what level of lipid control needs to be achieved for each individual. These include patients with diabetes, peripheral artery disease, those with a higher risk of stroke, kidney disease and transplant patients.



THE STOP-HF ASSESSMENT: SUMMARY

Each visit to the STOP-HF Screening Programme may include:

History Taking:

- | | |
|-----------------------------------|---------------------------------|
| 1. Risk factors for heart failure | 3. Current medications |
| 2. Medical and surgical history | 4. Presence of cardiac symptoms |

Physical Examination:

- | | |
|-------------------|--------------------|
| 1. Blood pressure | 3. Height |
| 2. Heart rate | 4. Abdominal girth |

Functional Tests:

- | | |
|----------------------|-------------------|
| 1. Electrocardiogram | 2. Echocardiogram |
|----------------------|-------------------|

Biomarker (blood) Tests:

- | | |
|------------------------|--------------------------------|
| 1. Natriuretic peptide | 3. Non-fasting glucose |
| 2. Non-fasting lipids | 4. Sample for further research |



THE STOP-HF ASSESSMENT: SUMMARY

Electrocardiogram (ECG)

An Electrocardiogram, or ECG, is a test that records the rhythm and electrical activity of the conduction system of the heart. It's this electrical activity that makes the heart contract, so by measuring it, any problems with the heart's rate or rhythm can be identified. An ECG is painless and only takes about 5 minutes. Several small, adhesive patches are put on the wrists, ankles and chest. These patches are connected to wires, which lead to a recording machine. The machine doesn't give electric shocks or affect the heart in any way. The machine records a few beats on paper.

Echocardiogram (Heart Ultrasound)

In this test a small probe is rubbed over the chest and takes pictures by ultrasound of your heart. It is used to measure the size of the chambers of the heart and how well these chambers function (It is also used to assess the valves inside of the heart and check for any changes in the shape of the heart). There may be follow up echocardiograms to measure the heart function over periods of time and in particular is advised when the Natriuretic Peptide result is elevated.

Ambulatory blood pressure monitor (ABPM/24-hour BP)

An Ambulatory blood pressure monitoring (ABPM) is used to measure and record the blood pressure over a twenty four hour period while carrying out with normal daily activities. 24 Hour blood pressure monitoring gives a better picture of what the blood pressure is, during the day and night, away from medical setting. Night time readings of blood pressure may give much valuable information and may predict potential problems associated with high blood pressure.

RISK FACTORS FOR HEART FAILURE

High Blood Pressure

High blood pressure in the blood vessels is known as hypertension. When the pressure is too high, the heart has to pump harder than normal to keep the blood circulating. Hypertension that is not controlled increases the risk of coronary heart disease, heart failure, cerebrovascular disease, peripheral artery disease, renal failure and atrial fibrillation.

Taking blood pressure medications, healthy lifestyle and exercise help to reduce high blood pressure and maintain control. It is important to adhere to blood pressure medication.

Diabetes mellitus

Diabetes occurs because the body can't use glucose properly, either due to a lack of the hormone insulin, or because the insulin produced doesn't work properly. Diabetes puts extra strain on the heart, increasing the risk of heart failure.

Type 2 diabetes (non-insulin dependent diabetes) more commonly occurs in adults after the age of 40 and is extremely common in old age. In this case, the person with diabetes makes some insulin. Usually associated with being overweight, this condition responds well to weight loss through dietary regulation. Sometimes weight loss is not enough and tablets are required to help the person's own insulin to work or additional insulin may be required. This type of diabetes is also known as adult-onset or maturity-onset diabetes.

Lipid Disorder

A lipid disorder means high levels of either low-density lipoprotein (LDL) cholesterol, or elevated levels of fats called triglycerides. High LDL cholesterol or high triglycerides, means an increased risk of developing heart disease.

The two major forms of cholesterol found in your body are high-density lipoprotein (HDL) and low-density lipoprotein (LDL).

HDL, or "good cholesterol", has a protective effect on the heart. HDL transports harmful cholesterol out of the arteries. Doctors usually recommend having a high level of HDL cholesterol.

STOP-HF SCREENING PROGRAMME

Lipid Disorder (Continued)

LDL, or “bad cholesterol”, is made by the body and also absorbed from cholesterol-rich foods such as red meat and dairy. LDL can combine with other fats and substances, creating blockages in the arteries. This can reduce your blood flow and cause serious health problems.

A triglyceride is a type of fat gotten from food. The body also produces it when it converts excess calories to fat for storage. Some triglycerides are necessary for the proper cell functions, but too much is unhealthy. People with high cholesterol often have a raised level of triglycerides.

A combination of healthy eating, exercise and medications can correct high cholesterol and triglycerides.

Coronary Heart Disease & Heart Attack

This is the most common risk factor for developing heart failure. Coronary heart disease causes a build-up of fatty material on the inside of the main blood vessels which supply blood to the heart, causing these vessels to narrow and become blocked. Loss of blood supply to an area of the heart results in a heart attack and this can lead to heart failure in the future.

Cancer Therapy

Cancer survival has improved in recent years, due to newer and better forms of treatment with chemotherapy and radiation. When treating cancer, some of the treatments may cause damage to your heart. This is especially true if at risk for heart disease. The combination of earlier cancer diagnosis and advances in cancer care over the last decade has lowered the cancer mortality rate, but has also led to more patients being at risk of cardiovascular disease.

Lifestyle

Lifestyle choices are an important consideration in preventing heart failure. Eating well and exercising have so many rewarding benefits and you find out more information in the lifestyle section in this booklet.

Taking Your Medication

Medication adherence means taking your prescribed medicine as you are advised by your healthcare professional. It is easy to remember to take medicines for something we can feel (e.g. pain medicine for arthritis). However, when the medicine is for high blood pressure, or high cholesterol, it is more difficult because people usually “feel fine”. Poor adherence to prescribed medicines can have a very bad effect on heart health.

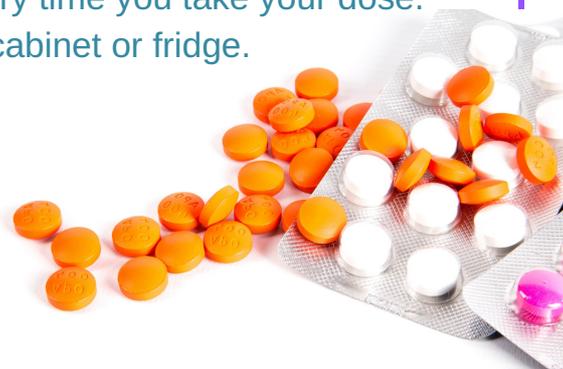
Taking medicine may be new to you. This can sometimes be hard to remember if you have a number of tablets to take and at different times. Reminders and medicine management systems can help and your pharmacist can advise on this.

You should never stop taking a medication that has been prescribed to you unless instructed to do so by a member of the medical team. If you feel the medication is not working speak to your doctor about an alternative. If you are feeling better and don't think you need the medication anymore, remember that you feel better because of the medication.

How can I remember to take my medicine?

If you have trouble remembering to take your tablets, try the following tips:

- Take your medicines at the same time every day (for example, with breakfast).
- Use special pill boxes that help you keep track of your medicines, such as the ones divided into sections for each day of the week.
Ask your pharmacist about these.
- Ask your pharmacist to put medicines into daily or weekly packs ('blister packs').
- Ask people close to you to remind you.
- Keep a 'medicine calendar' and make a note every time you take your dose.
- Put a sticker or reminder note on your medicine cabinet or fridge.



LIFESTYLE GUIDANCE

Physical Activity

“Physical activity is defined as any bodily movement produced by skeletal muscles that requires energy expenditure” World Health Organisation 2015. Simply put this means moving your body in a way that uses up energy.

If you are new to exercise, are overweight, obese or have an underlying medical condition please talk to your GP before starting.

It is internationally recognised that adults up to the age of 65, need a minimum of 30 minutes exercise, five days a week. This can be broken up into sessions of 10–15 minutes and gradually increased over time. There are three levels of intensity, light, moderate, and high.

If you experience any pain, **STOP!** Picking an activity you have previously done and enjoyed is a great place to start, or try something new. Any activity is good for you but a mix of aerobic (strengthen your heart, lungs and muscles), strength (for your bones and muscles), and stretching (for flexibility) is best.

Exercise and physical activity can help you to:

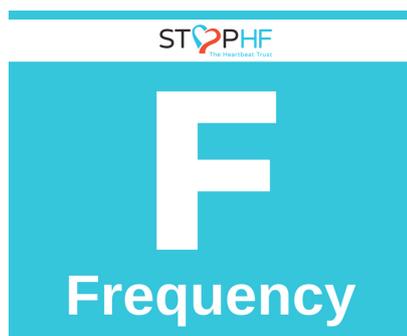
- Improve shortness of breath and tiredness
- Improve your fitness
- Reduce stress
- Reduce your blood pressure
- Help your mood

Tips for successful exercise regime

- Keeping a diary of your daily activities will allow you to track your progress, and visualise the positive changes you are achieving.
- In order to keep healthy and well you should aim to do a brisk half hour walk/cycle/swim 5–6 times per week.
- If you need to lose weight, you need to exercise up to an hour 5–6 days per week.
- If you have a problem with your back or joints, walking in a swimming pool or using stationary pedals can be an option.

What are the goals for exercise?

Ideally you should exercise for at least 150 minutes per week in bouts of 10 minutes or more. Following the F.I.T.T. principle can help you plan and organise your exercise weekly:



Try to get aerobic exercise 3-4 days a week. Strengthening work should be completed 2 days a week.



Take it easy at the beginning and gradually increase what you are doing. Always be aware of not pushing yourself too hard – as long as you can speak while you're exercising you're managing the intensity of the activity. Remember to warm up before and cool down after any activity and if you experience chest pain, dizziness or nausea you should stop exercising at once. If these symptoms continue, contact your doctor.



Your exercise should start gradually; this may be 5 to 10 minute bouts. Your aim as you improve is to exercise for approximately 20 to 30 minutes.



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LIFESTYLE GUIDANCE

Weight Management

Weight management is the process of establishing a long term approach to a healthy lifestyle. In other words, if you reduce the number of calories you take in using a healthy balanced diet and increase the number of calories you put out by sticking to your physical activity plan you will notice the weight loss, feel happier and more energetic in a matter of weeks.

It is also about recognising what your body needs and taking control of your eating habits.

It is not a fad diet designed to encourage weight loss at a rapid rate, instead a slow and steady progress for you to achieve what your ideal is.

In **STOP-HF**, you will have your height and weight taken to establish your Body Mass Index (BMI). This is done by an equation which will give you a number. This number identifies which category you are in, healthy, overweight or obese

Category	BMI (kg/m ²)
Severely underweight	15.0 to 16.0
Underweight	16.0 to 18.5
Normal (healthy weight)	18.5 to 25
Overweight	25 to 30
Obese Class I (Moderately obese)	30 to 35
Obese Class II (Severely obese)	35 to 40

You will also have your waist measured. If you are overweight and the extra weight is stored on your middle and not evenly distributed over your body studies have shown you are more at risk of developing high blood pressure, diabetes, heart disease and stroke.



A healthy waist measurement for:

- **Woman** is less than 80cm or 32 inches
- **Man** is less than 94cm or 37 inches

LIFESTYLE GUIDANCE

Healthy Eating

A good diet is important for good health. Eating a variety of foods can help you manage your weight and improve your general health and wellbeing. One of the easiest changes you can make is to eat a healthy and balanced diet.

This will help you to:

- Reach or maintain a healthy body weight
- Control some of your symptoms
- Feel better



Healthy eating is about getting the correct amount of nutrients; carbohydrates, protein, fat, vitamins, and minerals you need to maintain good health. Healthy eating helps us to feel good and stay at a healthy weight. Eating healthy foods can also reduce cholesterol level and reduce the risk of heart disease and diabetes. A healthy diet should be low in saturated fat, focusing on high fibre wholegrain foods, fruits, and vegetables, and eating fish twice a week, at least one portion to be an oily fish such as mackerel or salmon. Avoiding trans-unsaturated fats especially from processed foods, which increase LDL (bad cholesterol).

Recipe for healthy eating success

- Always eat breakfast
- Plenty of bread, rice potatoes, pasta and other starchy foods (wholegrain)
- Plenty of fruit and vegetables (at least 5 portions a day)
- Some milk, cheese and yoghurt (low fat options but be careful of hidden sugars)
- Some meat, fish, eggs, beans and other non-dairy sources of protein
- Just a small amount of foods and drinks high in fat and/or sugar
- Lowering salt intake to below 6g per day can help lower blood pressure (high blood pressure is an important risk factor for cardiovascular disease)
- Read food labels to avoid foods that are high in fat, sugar and salt
- Plan home cooked healthy meals instead of eating out
- Cut down on alcohol – it's high in calories
- Ask for support from your family, friends and healthcare team

LIFESTYLE GUIDANCE

Smoking

Smoking is a major cause of death in Ireland. One in every two smokers die of a tobacco related death.

It is never too late to stop. Improvements in general health starting at just 20 minutes later with blood pressure and pulse returning to normal. Within hours oxygen levels will increase. Within days the risk of heart attack and stroke is reduced. After 5 years the risk of having a heart attack falls to about half that of a non-smoker and after 10 years your risk of a heart attack is the same as someone who has never smoked.

There are many options and supports available once you make the choice to quit.

- Your local HSE promotion team hold sessions organised by a smoking cessation officer in St. Vincent's University Hospital, please speak to a member of your medical team to help you to arrange an appointment.
- Call the national Smokers Quit line 1850 201 203 or log onto www.quit.ie
- Your GP can help and support you and also prescribe medication to help you through.
- Your pharmacist can also assist in offering you advice on nicotine replacement therapies, which come in many forms.

STOP Smoking, SAVE Money!

It also helps to consider how much more money will be in your pocket. A smoker of 20 a day at €11 a packet would save €77 a week, €308 in an average month and €3,696 within a year.

**For more advice and support:
Visit www.quit.ie to sign up for the online Quit Plan
Visit www.facebook.com/HSEquit for further support.**

LIFESTYLE GUIDANCE

Alcohol Consumption

Long-term excessive drinking increases the risk of developing problems with the heart. This is because, drinking at this level can:

- Increase the risk of high blood pressure.
- Weaken the heart muscle, meaning the heart can't pump blood as efficiently.

In Ireland a standard drink has about 10 grams of pure alcohol in it.

This is broken down into units or a standard drink. An example of standard drinks from a pub is below:

- A pub measure of spirits (35.5ml)
- A small glass of wine (12.5% volume)
- A bottle of wine at 12.5% alcohol contains about seven standard drinks
- A half pint of normal beer
- An alcopop (275ml bottle)

Low risk weekly guidelines for adults are:

- Up to 11 standard drinks in a week for women
- Up to 17 standard drinks in a week for men

Drinking a large volume of drinks together is termed as binge drinking. Drinks should be spaced out over the week, not consumed in one sitting. Drinking more than the recommended levels may cause harm.

Remember: Low Risk Drinking Guideline

Women = 11 units per week max

Men = 17 units per week max

How much is in a bottle or a pint? Explaining the 'one standard unit'

1 pint of beer = 2 units

1 bottle of wine = 7 units approximately

LIFESTYLE GUIDANCE

Stress & Coping

"Tension is who you think you should be. Relaxation is who you really are" ~ Chinese proverb

If you find you often feel stressed, and you don't have good ways to manage it, you are more likely to develop heart disease, high blood pressure, chest pain, or irregular heartbeats.

Stress raises your blood pressure. It not good for your body to be exposed to the hormones related to stress. Studies also link stress to changes in the way blood clots, which increases health risks.

The way you handle stress is important. If you respond to it in an unhealthy way by overeating, smoking, drinking alcohol or not exercising that makes matters worse. On the other hand, if you eat well, exercise, connect with people, and find a way to manage your day despite the stress, that makes a difference in your emotions and in your body.

The first step is to recognise the signs of stress. The second is to find a way that works for you in managing it.

Try to change the source of stress, do you need to do something differently in work for example.

If the situation cannot be changed, change your reaction to it. Some ways to do this would be:

- Indulging in a pastime you enjoy such as walking or playing a round of golf.
- Take some time out from the situation causing the stress, listen to music, read, meditate or just take some deep breaths, in the fresh air if possible, these are all great ways to escape and relieve tension.
- Talk to friends and family let them know you are feeling stressed. Plan some time with them in a relaxed environment where you can talk and laugh.

LIFESTYLE GUIDANCE

- Try to recharge your batteries at the end of each day by going to bed a little earlier and aiming for 8 hours of sleep.

Mindfulness: How to look after yourself

- Accept there are events you cannot control
- Good work and life balance
- If you are a carer, make sure to take time for yourself
- Do pleasurable things: Walking, reading, gardening, other hobbies
- Try to keep positive
- Get enough sleep
- Eat well
- Avoid alcohol and smoking
- Seek social support
- Get help if you feel you are not coping



SUPPORT THE STOP-HF SCREENING PROGRAMME

HOW TO SUPPORT THE STOP-HF SCREENING PROGRAMME

You can donate today:

- **online:**

www.heartbeat-trust.ie

www.stophf.ie

- **by post:**

The Heartbeat Trust,
3 Crofton Terrace,
Dun Laoghaire
Co Dublin

- **by text:**

Text **HEARTBEAT**

to **50300** to donate €4.

– 100% of your donation goes

to the Heartbeat Trust across

most network operators. Some

operators charge VAT which

means that a minimum of €3.25

will go to the Heartbeat Trust.

– Service Provider: LIKECHARITY.

Helpline: 076 680 5278.

– Please note that donations through

text can only be made once every

24 hours.

You can also donate by:

– joining us at our fundraising events or organising your own event in aid of the Heartbeat Trust. See our website for more details.

The Heartbeat Trust is committed to best practice fundraising. It adheres to the 'Statement of Guiding Principles for Fundraising' which promotes transparency, honesty and accountability. We promise to hold any personal information you provide us with in line with the Data Protection Acts 1988 and 2003.

Interested in hearing more?

If you would like to hear about other Heartbeat Trust events, activities, awareness campaigns and appeals, please sign up to our mailing list at

Donate by Text

Text HEARTBEAT to 50300 to donate €4

www.stophf.ie

www.heartbeat-trust.ie

