



Fighting Heart Disease & Stroke

LIFE **AFTER A STROKE**

A patient and family guide

www.croi.ie





Fighting Heart Disease & Stroke

This booklet is about recovering from a stroke. The aim is to help stroke survivors and their families understand more about what it means to have a stroke and to get the best from the recovery and rehabilitation process.

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WHO ARE WE

At Croí, our aim is to lead the fight against heart disease and stroke, with a particular focus on the West of Ireland. We support survivors on their journey to live the best possible life after stroke. Our mission is to prevent heart disease and stroke, save lives, promote recovery and wellbeing.

Our work is funded from the proceeds of fundraising events, voluntary contributions and philanthropy. We are deeply grateful for the support and endorsement of our donors, supporters and volunteers who give so generously of their time and resources.

This booklet has been designed to help you understand stroke and the recovery process and it is not intended to replace the medical advice of your doctor.

You can find out more at www.croi.ie.



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WHAT IS A STROKE?

A stroke is a type of brain injury. A stroke happens when the blood supply to a part of the brain is suddenly blocked or reduced.

Your brain needs a constant supply of blood to function normally. Without a supply of blood carrying oxygen and nutrients, brain cells start to die within minutes leading to brain damage. This is a medical emergency and needs immediate urgent care.

No two strokes that happen are ever exactly the same. A stroke can happen at any age, with one in five people having a stroke at some time in their life. It could happen to you, a friend or family member.



TYPES OF STROKE

There are two major kinds of stroke, ischemic and hemorrhagic.

Ischemic Stroke

Most strokes are this type. An ischemic stroke happens when an artery that supplies blood to your brain becomes blocked by a blood clot. Blood clots are more likely to form in arteries damaged by the build up of a fatty substance called plaque (atherosclerosis).

The most common causes of ischemic stroke are:

- **Cerebral thrombosis** - this occurs when a clot forms in a blood vessel (an artery) supplying blood to an area of the brain. Clots normally form in arteries that have already been narrowed by a condition called atherosclerosis (hardening of the arteries).
- **A cerebral embolism** - this is a partial clot that may form in your heart or the blood vessels of your neck. This partial clot can be carried in your bloodstream to your brain and get lodged in an artery. A cerebral embolism can be caused by an irregular heart beat known as atrial fibrillation. It creates conditions where clots can form in the heart, dislodge and travel to the brain.

Hemorrhagic Stroke

Hemorrhagic stroke accounts for about 20% of strokes. Hemorrhagic strokes happen when a blood vessel ruptures causing a bleed inside the brain. This affects all the surrounding brain cells causing them to die.

The most common causes of hemorrhagic stroke are:

- Uncontrolled high blood pressure
- Weak spots in your blood vessel walls (aneurysms)
- Rupture of an abnormal thin-walled blood vessels (arteriovenous malformation)

TIA

A TIA (transient ischemic attack), or “mini stroke” has the same symptoms as a stroke, but only lasts for a few hours or a day and does not cause permanent brain damage.

A TIA is not a stroke but it is an important warning signal. A TIA is a very serious warning sign to improve your health, or you may suffer more TIAs or even a stroke.

HOW TO RECOGNISE A STROKE


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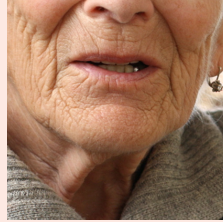
FACE

The face may have drooped on one side, the person may not be able to smile.


A

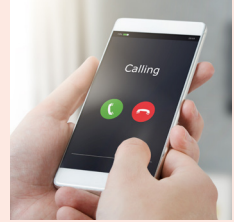
ARMS

The person may not be able to lift both arms and keep them there because of weakness or numbness.


S

SPEECH

Their speech may be slurred or garbled, or they may not be able to understand what is being said.


T

TIME

It's time to dial 999 / 112 immediately if you notice any of these signs or symptoms.

The signs and symptoms of a stroke vary from person to person, but usually begin suddenly. The type of symptoms depends on the type of stroke and the area of the brain that's affected. A stroke is always a medical emergency. The longer a stroke remains untreated, the greater the chance of stroke-related brain damage. Emergency medical treatment soon after symptoms begin improves the chance of survival and successful rehabilitation.

Signs and symptoms may include:

- sudden weakness affecting one side of the body - face, arms, or legs
- sudden numbness affecting one side of the body - face, arms, or legs
- confusion
- trouble speaking or understanding speech
- slurred speech
- problems reading
- trouble seeing in one or both eyes
- dizziness, loss of balance or coordination
- sudden and severe headache

RISK FACTORS FOR STROKE

Certain traits, conditions, and habits can increase your risk of having a stroke or a transient ischemic attack (TIA). These are known as risk factors.

The more risk factors you have, the more likely you are to have another stroke or cardiac event. You can treat or control some risk factors, such as high blood pressure and smoking. Other risk factors, such as age and gender, you can't control.

THE MAJOR RISK FACTORS FOR STROKE INCLUDE:

NON-MODIFIABLE	MODIFIABLE LIFESTYLE	MODIFIABLE MEDICAL
Age: A stroke can happen to anyone, but risk of stroke increases with age.	Smoking: Being a smoker doubles the risk for stroke when compared to a non-smoker. It reduces the amount of oxygen in the blood, causing the heart to work harder and allowing blood clots to form more easily. It also increases the amount of build-up in the arteries, which may block the flow of blood to the brain, causing a stroke.	High Blood Pressure: Uncontrolled high blood pressure can lead to stroke by damaging and weakening your brain's blood vessels, causing them to narrow, rupture or leak. High blood pressure can also cause blood clots to form in the arteries leading to your brain, blocking blood flow and potentially causing a stroke.
Gender: Women suffer more strokes each year than men, mainly because women live longer than men and stroke occurs more often at older ages. However stroke incidence is higher in men than women at younger ages.	Alcohol: drinking more than one to two alcoholic drinks each day can increase stroke risk and lead to other medical problems, including heart and liver disease. Binge drinking is particularly associated with increased risk for Atrial Fibrillation.	Atrial Fibrillation (AF): AF is an irregular heartbeat. AF can result in pooling of the blood in the heart, which can lead to blood clot formation. If these blood clots break away they can travel to the brain and cause a stroke.

NON-MODIFIABLE	MODIFIABLE LIFESTYLE	MODIFIABLE MEDICAL
<p>Race: African American, Hispanic and Asians have a higher risk of stroke when compared to Caucasians.</p>	<p>Physical Activity: Being physically active is one of the most important steps you can take to reduce your blood pressure and cholesterol. It helps to reduce your overall risk of a further stroke and heart disease.</p>	<p>High Cholesterol: Cholesterol is a fatty substance which is essential to normal functioning of the body. If there is too much cholesterol in the blood the body is unable to get rid of it and cholesterol is deposited along the walls of the arteries. Overtime these deposits can build up and narrow the arteries that supply the heart and brain with blood and may result in a heart attack or stroke.</p>
<p>Family history: If a first line family member (mother, father, sibling) has had a stroke under the age of 65 years everyone in the immediate family is at greater risk of stroke.</p>	<p>Excess Weight: Being overweight or obese puts a strain on the entire circulatory system. It increases your risk for high blood pressure and Type 2 Diabetes, which are major risk factors for stroke.</p>	<p>Diabetes: People with diabetes are 1.5 times more likely to have a stroke than someone who does not have this condition.</p>
<p>Previous stroke or TIA: At least 1 in 4 of those who have a stroke each year will have another stroke within their lifetime.</p>	<p>Stress: Constant stress can affect behaviours and factors that increase the risk of stroke and heart disease. Some people may choose to drink too much alcohol or smoke cigarettes to “manage” their chronic stress. However, these habits can increase blood pressure which can lead to damage of the artery walls. Stress can directly cause the arteries to become inflamed, contributing to a process that increases heart disease and stroke risk.</p>	

HOW IS STROKE DIAGNOSED?

When you first arrive at hospital with a suspected stroke, the doctors will want to find out as much as they can about your symptoms, what type of stroke you've had and it's cause.

Your doctor will diagnose your stroke based on your symptoms, using a range of neurological tests, which will not cause you any discomfort.

If your doctors think you have had a transient ischemic attack (TIA), they will work with the specialised stroke team to look for its cause, to help prevent a future stroke.

The specialised stroke team is made up of doctors, nurses, physiotherapists, occupational therapists, speech and language therapists, social workers and dietitians. You may have met some of the specialist team during your hospital stay.



DIAGNOSTIC TESTS AND PROCEDURES

Your doctor may recommend one or more of the following tests to diagnose a stroke or TIA.

CT scan (Computed Tomography)

A brain CT scan, is a painless test that uses x-rays to create multiple images to build up a more detailed, three-dimensional picture of your brain to help your doctor identify any problem areas.

During the scan, you may be given an injection of a special dye into one of the veins in your arm to help improve the clarity of the CT image and look at the blood vessels that supply the brain.

A scan may show what type of stroke you have had and what area of the brain has been affected.

MRI Scan (Magnetic Resonance Imaging)

MRI uses magnets and radio waves to create more detailed pictures of your brain. This test may detect changes in brain tissue and damage to brain cells from a stroke. It is usually used in people with more complex symptoms, where the extent or location of the damage is unknown. It is also used in people who have recovered from a TIA.

An MRI may be used instead of, or in addition to, a CT scan to diagnose a stroke.

Computed Tomography Arteriogram and Magnetic Resonance Arteriogram

A CT arteriogram (CTA) and magnetic resonance arteriogram (MRA) can show the large blood vessels in the brain. These tests may give your doctor more information about the site of a blood clot and the flow of blood through your brain.

Carotid Ultrasound

Carotid ultrasound is a painless test that uses sound waves to create pictures of the insides of your carotid arteries which are located in your neck. These arteries supply oxygen-rich blood to your brain. Carotid ultrasound shows whether plaque has narrowed or blocked your carotid arteries.

Your carotid ultrasound test may include a Doppler ultrasound. Doppler ultrasound is a special test that shows the speed and direction of blood moving through your blood vessels.

ECG (Electrocardiogram)

An ECG is a simple, painless test that records the heart's electrical activity. The test shows how fast the heart is beating and its rhythm (steady or irregular). An ECG also records the strength and timing of electrical signals as they pass through each part of the heart. An ECG can help detect heart problems that may have led to a stroke. For example, the test can help diagnose atrial fibrillation or a previous heart attack.

Echocardiography

Echocardiography or ECHO, is a painless test that uses sound waves to create pictures of your heart.

The test gives information about the size and shape of your heart and how well your heart's chambers and valves are working.

An ECHO can detect possible blood clots inside the heart and problems with the aorta. The aorta is the main artery that carries oxygen-rich blood from your heart to all parts of your body.

Blood Tests

Blood tests will be ordered by your doctor and are useful in helping to identify risk factors for your stroke and to eliminate other medical conditions that may be causing stroke-like symptoms. They are a standard and common procedure.



HOW IS STROKE TREATED?

Treatment for a stroke depends on whether it is a clot or a bleed that has caused the stroke in the first place. Treatment for a transient ischemic attack (TIA) depends on its cause, how much time has passed since symptoms began, and whether you have other medical conditions.

The most effective treatment for a stroke is to be treated by a specialised stroke team. Effective and early treatment of stroke can prevent long-term disability and save lives.



TREATING ISCHEMIC STROKE

Treatment for an ischemic stroke or TIA may include drug treatment and medical procedures.

DRUG TREATMENT

If you have had a stroke and the doctor has established with a scan that it was not caused by a bleed, you will more than likely be given some form of blood-thinning drugs.

- Thrombolysis: ‘Clot busting’ treatment. A medicine called tissue plasminogen activator (tPA) can dissolve blood clots in the arteries of the brain with powerful blood thinners. Ideally, it should be given as soon as possible. However not everyone is able/suitable to receive this.
- Antiplatelets – blood thinning treatment. Most people who have not had a bleed will start aspirin or other blood thinning medication within 48 hours of a stroke. Antiplatelet medicines help stop platelets from clumping together to form blood clots.
- Thrombectomy – a tube is threaded into the blocked blood vessel in your brain to trap and remove the clot. This procedure is most helpful when the stroke has been caused by a large clot.

TREATING HEMORRHAGIC STROKE

A hemorrhagic stroke occurs if an artery in the brain leaks blood or bursts open. The first steps in treating a hemorrhagic stroke are to find the cause of bleeding in the brain and then to try to control it.

Unlike ischemic strokes, hemorrhagic strokes are not treated with clot-busting or blood-thinning medicines. This is because these medicines can make bleeding worse. If you're taking blood-thinning medicines and have a hemorrhagic stroke, you'll be taken off the medicine. If high blood pressure is the cause of bleeding in the brain, your doctor may prescribe medicines to lower your blood pressure. This can help prevent further bleeding.

Surgery also may be needed to treat a hemorrhagic stroke. Your scans will be assessed by the Neuro-radiologist/neurosurgeon to decide if surgery is an option.

SURGERY AFTER STROKE

There are several types of surgery that are used to treat stroke and restore blood flow to the brain.

There are three main reasons you will be taken into surgery after your stroke:

1. To remove excess plaque in the carotid artery.
2. To strengthen a weak point (aneurysm) in a blood vessel.
3. To remove a blood clot from the brain after a stroke.

RECOVERING FROM THE EFFECTS OF STROKE

It can take time to recover from a stroke. There is no set time or method and each person gradually recovers in their own time and at their own pace. Recovery is usually a gradual process, it can take weeks, months or even years. Some people recover fully, while others have long-term or lifelong disability.

The effects of stroke can vary widely and depend on what part of the brain has been injured and how much brain tissue is involved. Even small injury to certain areas can be serious, while other areas can be quite badly injured with little visible effect. Your attitude, good support from your family and friends and expert help from the stroke rehabilitation team can help ensure you make a good recovery.

It's difficult to predict how a stroke survivor will be affected at any phase of recovery. Understanding the nature of the effects of stroke and what can be done about them is the first step to recovery. People who have had strokes may share common effects; however no two strokes are exactly the same.

Each side of the brain controls the opposite side of the body (right side of brain controls left side of body, with the left side of brain controlling the right side of the body).



WHAT HAPPENS TO YOUR BRAIN AFTER A STROKE

LEFT BRAIN

If a stroke occurs in the left side of the brain, the right side of the body will be affected, producing some or all of the following:

- weakness or numbness on the right side of the body
- speech/language problems
- slow, cautious behaviour

The brain is divided into 4 main sections called lobes, the cerebellum and the brain stem. Symptoms vary depending on which area has been damaged.

FRONTAL LOBE

If the frontal lobe is affected, a person can have

- difficulties in problem-solving and decision-making
- difficulties in activating and controlling muscles
- a lack of insight into their condition
- changes in behaviour, especially aggression, violence and the inability to stop themselves from saying inappropriate things

RIGHT BRAIN

If a stroke occurs in the brain's right side, the left side of the body will be affected, which could produce any or all of the following:

- weakness or numbness on the left side of the body
- quick, inquisitive, impulsive behaviour
- the inability to judge distances, which can lead to falls or loss of hand-to-eye coordination
- neglecting or ignoring anything situated to the left of the body

PARIETAL LOBE

- neglect of the left hand side of the body (may only eat food on the right hand side of a plate, or when asked to draw a clock face they put all of the numbers in one side)
- difficulty naming objects, writing and reading
- problems with co-ordination (may be unable to dress themselves)
- problems with sensation, particularly proprioception (may not be able to tell what position their limbs are in or what they are doing)

TEMPORAL

The right and left temporal lobes have slightly different functions and so damage to each side may present differently

- right side – may not be able to recognise faces, and may talk a lot
- left side – will show problems with spoken language, especially the understanding, remembering and recognition of words
- damage to either side can present with aggression, sexual inhibition and short-term memory problems

OCCIPITAL

- inability to recognise objects
- hallucinations
- difficulty in recognising colours

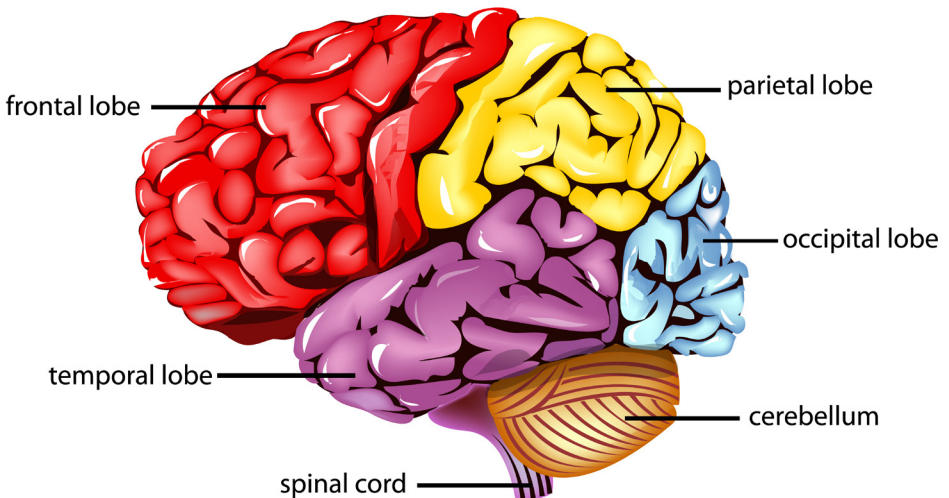
CEREBELLUM

- loss of hand-eye co-ordination
- abnormal eye movements
- not being able to perform rapid, alternating movements
- staggering, or a wide-based gait whilst walking (ataxic gait, similar to that of a person who has consumed excess alcohol)
- slurred speech

BRAIN STEM

- inability of the body to control heart rate, breathing and swallowing.
- complete paralysis
- coma
- death

Parts of the Human Brain



AFTER YOUR STROKE

Getting strong support and understanding from family and friends, plus intensive rehabilitation (rehab) from healthcare professionals, can always improve a stroke survivor's quality of life. Rehab may include working with nurses and speech, physical, and occupational therapists. Your health team will work with you to ensure you make the best recovery possible. Everyone progresses differently in the first few days after a stroke.

Once you receive initial treatment, your doctor and the multidisciplinary team will treat your stroke risk factors to prevent future complications.



WHO IS ON THE REHABILITATION TEAM?

The stroke rehabilitation team provides a specialist service to those who have had a stroke.

The very word “stroke” indicates that no one is ever prepared for this sudden, often catastrophic event. Stroke survivors and their families can find workable solutions to most difficult situations with the help of the rehab team.

Using rehab goals, your team will work with you to help you regain as much independence as possible, relearn skills you may have lost, learn new skills and find ways to help you adjust to life following stroke.

Consultant Doctor

The consultant is responsible for the overall treatment and coordination of your medical care. The consultant, supported by a medical team, will provide your day-to-day medical care during your hospital stay.

Nursing Staff

The nursing staff will assess your nursing needs on an ongoing basis. Staff will actively promote independence and self-management by teaching, coaching and supporting you to do as much for yourself as possible.

A stroke nurse specialist will provide you with information, support and education and will act as a link person to other members of the team. They will also provide vital support and information to you, your family, relative or carer.

Physiotherapy

The physiotherapist will help you with your physical stroke recovery. Based on your individual needs the physiotherapist will support you in strengthening weak muscles, improving balance and mobility and achieving the best function from weak limbs.

Occupational Therapy

The occupational therapists will work with you to help regain skills used in daily living activities (washing, dressing, eating and preparing meals), working, driving and socialising to the best level possible. They will also assess for problems surrounding your ability to remember information, difficulties learning how to do things, or making decisions. The Occupational Therapist may also assess your home and assist you with preparing your home when you are ready to return home.

Medical Social Work

The medical social worker in the hospital will assist you and your family by providing help and support in adapting to life after your stroke and planning for your future. The social worker will give you and your family information you may need regarding benefits, entitlements, HSE and voluntary services and assist you in making applications for same.

They will liaise with community services on your behalf while in hospital. They can organise family meetings to discuss any anxieties or problems you and your family may

encounter and to plan your discharge with the multi-disciplinary team. The social worker can also provide advice and support to your carer.

Speech and Language Therapy

The speech and language therapists will assess and treat any difficulties you may have in relation to communication, swallowing and eating.

Dietitian

The dietitian will assess and monitor your nutritional needs and, where appropriate, will provide you with individual diet therapy, education and advice.

Healthcare Assistants

Healthcare assistants work under the direction of the nurses and will provide care and general assistance to you during your stay. They will help and encourage you while doing certain daily tasks as you progress through your rehabilitation, including dressing, toileting, showering and feeding as you make your way back to independence.



COMMON PROBLEMS AFTER STROKE

Communication

You may have trouble communicating after a stroke. Communication involves our language (the words we use) and speech (how we sound). The speech and language therapist will work with you and your family to maximise your ability to communicate.

Language

Language difficulties after a stroke are called aphasia. You may not be able to find the right words, put complete sentences together, or put words together in a way that makes sense. You may find it difficult to understand what is being said or follow conversations, especially if you are in a group. You may have problems with your memory and thinking clearly. Reading and writing may also be affected. Aphasia does not affect intelligence and new ways of communicating can help reduce your frustration. Speech and language therapists can help you learn ways to communicate again.

Speech

Speech difficulties after stroke are called dysarthria. This is caused by weakness in the muscles, particularly the lip and tongue. If one side of your face is weak, your speech may not be as clear as it was before. You may be frequently asked to repeat yourself, which can be tiring and frustrating. The speech and language therapist can give you exercises and strategies to improve the clarity of your speech.

Swallowing and Eating Problems

Dysphagia is the term used for swallowing difficulties. You may have difficulty swallowing after a stroke. Signs of this difficulty are coughing or choking during or after eating and drinking. The speech and language therapist will assess your swallow to see if it is safe for you to eat and drink. If you find it difficult to swallow you will not be allowed to take anything by mouth in the early stages, you will be placed on a drip or fed through a tube. This is to prevent pneumonia, which is caused by food and/or drink going the wrong way into the lungs (aspiration).

Over the first few days/weeks, most people will see an improvement in their swallow. For those who can eat and drink, they may require some changes to make it safer and easier to swallow, including softer food, thickened fluids or swallow exercises.

Your speech and language therapist will work with you and your family to improve your swallow function.

Muscle and Nerve Problems

Stroke may cause brain injury, therefore you may experience paralysis (an inability to move) muscle weakness or loss of sensation on one side of your body.

The stroke may affect one whole side of the body or part of one side. The loss of feeling to one side can lead to loss of awareness, so people may forget or ignore their weaker side. This problem is called “neglect.”

As a result, any or all of the following problems may emerge:

- they ignore items put on the affected side
- have trouble reading
- dressing only one side of their body and thinking they're completely dressed
- Bumping into furniture or door jambs when walking or using the wheelchair is also common with stroke survivors who have neglect

One-sided neglect is most common on the left hand side when it is due to injury to the right side of the brain.

Problems with balance or coordination can make it hard for you to sit, stand or walk even if muscles are strong enough. You may have pain, numbness or odd

sensations which can make it difficult for you to relax and feel comfortable.

Physiotherapists and occupational therapists can help you strengthen your muscles. They can also help you relearn how to do daily activities, such as dressing, eating, and bathing.

Bladder and Bowel Problems

Stroke can affect the muscles and nerves that control the bladder and bowels. You may feel like you have to urinate often, even if your bladder isn't full. Medicines and a bladder or bowel specialist can help with these problems.



Visual Problems

Visual problems are common after a stroke. They often resolve themselves in time as the brain recovers, although where recovery doesn't happen, they can be quite difficult to adjust to. Visual problems after a stroke fall into several categories, depending on exactly where in the brain the stroke occurred.

- Central vision loss - the partial or complete loss of vision in one or both of your eyes
- Visual field loss - you are unable to see properly either to the left or to the right of the centre of your field of vision
- Eye movement problems
- Visual processing problems (unable to recognise colours, faces, objects)

Eye movement problems are common after stroke. Problems can include:

- Impaired eye movements
- Inability to move both eyes up, down or sideways

Exercises can improve eye movements where there is difficulty moving the eyes to look at objects held close to the face.

Prisms can join double vision or displace vision if you are unable to look to one side. A patch can also be used to eliminate troublesome double vision.



EMOTIONAL ISSUES AND SUPPORT

Accepting that you have had a stroke is normally one of the first steps towards recovery. Acceptance can take some time. Acknowledging and accepting the limitations that you may now have as a result of your stroke can be a difficult time. Linking in with close family, friends, health care professionals and your local stroke support group will enhance your recovery and provide you with the support you may need.

After a stroke, you may have changes in your behaviour or judgment. For example, your mood may change quickly, you may have little or no control over emotional responses, and you may laugh or cry for no reason. Because of these and other changes, you may feel scared, anxious, and depressed. Recovering from a stroke can be slow and frustrating.

Coping emotionally after your stroke can be difficult for some people. It is important to note that everyone recovers differently and to allow yourself time to help your body and mind to adjust. Healthcare professionals will guide you towards recovery and it is important to have patience with yourself and others. Some people experience depression or low mood after a stroke and these are some of the signs to look out for;

- loss of appetite, weight loss
- feeling anxious, sad or tearful all the time
- difficulty sleeping or sleeping too much
- no energy
- feeling closed off from other people

WHAT YOU CAN DO IF YOU FEEL DEPRESSED:

- Talk about how you feel with your healthcare team.
- Sometimes it can help to talk about what is making you sad. It can make you feel better if your friends and family know how you feel however it can be difficult to do this if you have aphasia (difficulty in expressing oneself when speaking, trouble understanding speech, and difficulty with reading and writing).
- You may feel cut off and lonely if you have aphasia. So it may help to try and meet with others in the same situation. Talk with your health team about local support groups.
- Joining a patient support group may help you adjust to life after a stroke. You can see how other people have coped with having strokes.
- Some people find talking to a counsellor helps. They prefer to talk to someone who isn't too close to them.
- Your doctor may recommend medicines or other treatments that can make you feel less anxious and sad and help you to sleep.

FATIGUE AFTER STROKE

After a stroke, you may feel like you lack energy or strength and feel constantly weary or tired. Post-stroke fatigue does not always improve with rest and is not necessarily related to recent activity. So it is not like typical tiredness.

Why Does This Occur?

Fatigue can occur when particular areas of the brain are affected by the stroke. Tiredness may be a part of the brain's recovery and may mean that you cannot take on too much. The effort required for listening, talking and concentrating can be exhausting.

What Can Help?

- Fatigue is common after stroke. Try and practice the tasks therapists have taught you between sessions – but don't exhaust yourself.
- Understand why each task has been set, they will help to keep you motivated.
- Make a note of when you get tired and what makes you tired.
- Don't take on too much at once.
- Make time to rest.
- Arrange to do things when you are at your best, perhaps this is in the morning or early part of the day.
- Some people find complimentary therapies useful such as mindfulness, deep breathing and relaxation techniques for example.
- Talk to your therapists about any concerns or questions you may have.
- Try and eat a healthy diet and if you can try and get some exercise within your limitations.
- Remember that progress can be slow as recovery is a gradual thing.



MEDICATIONS FOLLOWING A STROKE

If it has been established on a CT brain scan that your stroke was not caused by a bleed, you are likely to be prescribed blood thinning medications. In addition you may need medication to treat high blood pressure and cholesterol. If you have any queries in relation to your medications, please contact your GP and/or consultant. Some of these medications are explained on the following page.

MEDICATIONS FOLLOWING A STROKE (CONT.)

Anti-Platelet

Anti-platelet drugs help to reduce clot formation. The main anti-platelet drugs prescribed after stroke are: Aspirin, Clopidogrel (Plavix), Dipyridamole (Persantin).

Possible side effects:

- irritation of the stomach lining (rare-unless you have a stomach ulcer)
- wheeziness (asthmatic patients should take caution)
- increased risk of bleeding (very rare)

Always consult your pharmacist when buying over-the-counter pain medication as some of these medications may contain aspirin.

- severe bruising
- red or dark brown urine
- red or black bowel movements
- for women, heavier bleeding during periods, or other vaginal bleeding that is not caused by periods

If you experience any of the above side effects, please seek medical attention. Always inform medical doctors, surgeons and dentists that you are on these medications.

Blood Pressure Lowering (Anti-Hypertensive) medication

There are many different types of blood pressure lowering medications and your doctor will choose the most suitable medication for you. There are four main groups of blood pressure medications.

1. Ace Inhibitors

These reduce the workload of the heart making it easier for it to pump. They lower blood pressure by allowing arteries to relax.

Names: Ramipil (Tritace, Ramilo, Ramic), Lisinopril (Zestril), Perindopril (Coversyl), Enalapril (Innovace), Captopril (Capoten).

Possible side effects:

- dizziness when standing up
- persistent dry cough
- change in taste
- reduced kidney function

Anti-Coagulants

Anti-coagulants decrease the clotting (coagulation) ability of the blood and can help reduce the risk of harmful clots forming in the blood vessels.

Names: Warfarin, Dabigatran (Pradaxa), Rivaroxaban (Xarelto), Apixaban (Eliquis), Edoxaban (Lixiana)

Anti-coagulants are given to people who have had an ischaemic stroke who were found to have an irregular heart beat called Atrial Fibrillation. People taking Warfarin need regular blood tests to ensure blood is thinned to the correct consistency.

Possible side effects:

- you may bleed easily if cut, so make sure to apply pressure for longer than normal

2. Beta Blockers

They reduce the heart rate (pulse) and cardiac output, which lowers blood pressure and makes the heart beat more slowly and with less force.

Names: Atenolol (Tenormin, Atecor), Bisoprolol (Emcor, Bisolol, Cardicor), Nebivolol (Nebilet), Metoprolol (Betaloc), Carvedilol (Eucardic)

Possible side effects:

- Tiredness - particularly when starting the medication
- Cold hands or feet
- Wheeziness
- Disturbed sleep/ nightmares
- Erectile dysfunction

3. Calcium Channel Blockers

These are also known as Calcium Antagonists or Calcium Blockers.

Names: Diltiazem (Tildem, Dilzem, Adizem), Amlodipine (Istin), Lercandipine (Zanidip), Verapamil (Ispotin, Verap)

What do they do?

They interrupt the movement of calcium into the cells of the heart and blood vessels

They decrease the heart's pumping strength and relax blood vessels. This medication may be used to treat some arrhythmias (abnormal heart rhythms).

Possible side effects:

- Flushing
- Headaches
- Dizziness
- Ankle swelling
- Constipation
- Nausea

4. Angiotensin II Antagonists

These are also known as Angiotension II Receptor Antagonists or ARBs.

Names: Losartan (Cozaar), Valsartan (Diovan), Candesartan (Atacand), Telmisartan (Micardis), Irbesartan (Aprovel)

What do they do?

- lower blood pressure
- reduce workload on the heart
- improve the heart's pumping action

Possible side effect:

- Light-headedness

Cholesterol lowering medications

Individuals who have had an ischemic stroke will be given cholesterol-lowering medication even if their cholesterol is not high. These medications will help slow down the cholesterol production process.

Names: Simvastatin (Zocor); Atorvastatin (Lipitor); Rosuvastatin (Crestor); Pravastatin (Lipostat) / Cholesterol Absorption Inhibitors: Ezetimibe/ Simvastatin / Fibrates (Fenofibrate (Lipantil) and Gemfibrozil (Lopid).

Medications need to be taken as prescribed and should only be stopped if you are told to do so by your doctor or nurse. If you suffer from any of the side effects listed above please report to your doctor as alternative medication can be prescribed. There are no lasting side effects once medication is stopped. Please contact your GP or consultant if you have any queries or concerns.

DRIVING AFTER STROKE

You will have to be assessed by your doctor to confirm your fitness to return to driving. This may involve a referral for an assessment of your functional and cognitive ability to return to driving. This may be an ongoing process, if at first you are not suitable.

There are some circumstances when it is not possible to return to driving after a stroke. For example, if you have suffered a seizure (you will not be allowed to drive for 12 months) or if you have any eyesight loss. You will be assessed by the stroke rehabilitation team if they, or you, have any concerns about your ability to return to driving.

Importantly, before you return to the road, your motor vehicle licence authority and your insurance company need to be informed that you have had a stroke and will need a medical report from your doctor to state you are safe to return to driving.

For more information, please log on to www.rsa.ie



CARERS, FAMILY AND FRIENDS

Family support and support from friends is very important for anyone who has had a stroke. Because stroke survivors often have complex rehabilitation needs, progress and recovery are different for each person. Since every stroke is different, people have different needs for help from carers, depending on their physical, cognitive and mental issues.

It's important that the carer understands the physical and emotional needs of the stroke survivor, and that the stroke survivor understands that the carer is there to support them in providing the necessary care.

Difficulties can arise for the carer as family and relationships dynamics often change and it can become more difficult to stay in their employment role. Those who leave their employment to care for a person who has had a stroke may be entitled to a carer's allowance. You should discuss this with your social worker, local social welfare office and/or local health centre.

After a person has had a stroke, personalities and emotional behaviour can be affected. Inability to perform certain tasks for themselves can lead to disappointment and frustration. Allow time to support your family member to accomplish tasks.

Caring for someone who has had a stroke can be a demanding but rewarding role. It is vitally important that carers look after their own health and wellbeing and are supported to do so. If at any stage a carer finds the care needs of the person who has had a stroke both physically and emotionally overwhelming, they should speak to their GP and/or social worker for advice and support.



HSE online resource for carers: www.hse.ie/eng/services/list/3/carerssupport/

SUPPORT IN YOUR HOME

Some people who have had a stroke may not have close relatives to help with their care and caregivers may also need support. There are different services in different areas, but may include:

- Home help
- Care assistants
- Meals on wheels
- Respite in a respite centre to give carers a short break

Sometimes a person may need more care than they can receive at home. If this is the case, your social worker can help you to think about the type of care which would be suitable for you, from sheltered accommodation, to residential care in a nursing home to 24-hour nursing care.





STROKE SUPPORT GROUPS

While everyone's experience of having a stroke is different, meeting other stroke survivors or caregivers who understand what you are going through can help you throughout your recovery. Stroke support groups usually meet on a weekly to monthly basis.

The aims of a stroke support group are:

- To create a positive environment to meet others and share experiences, help each other solve problems, and expand your social life.
- To provide advice, education and support on stroke and good health.
- To encourage participation in enjoyable activities beneficial to your wellbeing.
- To provide information on how to access services local to you.
- Peer support and friendship.

CROÍ HEART AND STROKE CHARITY

At Croí, our aim is to promote recovery and wellbeing following stroke.

We offer a range of stroke support services, which include:

- Monthly stroke support groups which meet in Galway (Croí Heart and Stroke Centre) and in Mayo (alternates between Castlebar and Ballina).
- Specialised physical activity programmes, including chair-based activities designed for those with physical limitations.
- Yoga for the heart and mind, designed specifically for those who have had a stroke.
- Communication group run by a speech and language therapist for those with speech and communication difficulties following stroke.
- Health & lifestyle educational programmes that focus on risk reduction.

For further information on the stroke support groups or to find out more about the services that Croí offer, please visit www.croi.ie or call 091 544310.

USEFUL INFORMATION

CROÍ, THE HEART & STROKE CHARITY

At Croí, our aim is to promote recovery and wellbeing following stroke.

Tel: 091-544310

Email: info@croi.ie

Website: www.croi.ie

QUEST

Counselling After Stroke

Address: The Quest Building, 9A Liosban Business Park, Tuam Rd, Galway

Tel: 091-778850

ACQUIRED BRAIN INJURY IRELAND

Community supports for people affected by acquired brain injury.

Tel: 01-2804164

Website: www.abiireland.ie

NATIONAL REHABILITATION HOSPITAL, DUN LAOGHAIRE

Tel: 01-235500

Website: www.nrh.ie

CARERS ASSOCIATION OF IRELAND

Services nationwide for family carers.

Tel: 057-9322920

Email: info@carersireland.com

Website: www.familycarers.ie/

CARING FOR CARERS

Semi-state body with information for carers.

Tel: 065-6866515

Website: www.familycarers.ie/

IRISH HEART FOUNDATION

The Irish Heart Foundation is working to reduce preventable death and disability from heart disease and stroke.

Tel: 01-6685001

Email: info@irishheart.ie

Website: www.irishheart.ie

HEADWAY

Specialises in brain injury rehabilitation after illnesses such as strokes. They try to assist people to rebuild their skills and confidence to achieve the best quality of life that they can.

Tel: 1890-200278

Email: info@headway.ie

Website: www.headway.ie

CITIZENS INFORMATION CENTRES

Information, advice and advocacy on a range of public and social services.

Tel: 1890-777121 or 021-4521600.

Website: www.citizensinformation.ie

OTHER LINKS:

- www.rsa.ie
- www.hse.ie/eng/services/list/3/carerssupport/

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

DONATE TO CROÍ

As an independent not-for-profit organisation, all our activities are funded from our own fundraising initiatives and revenue generating activities. We are not a state-funded organisation so each year we have to generate enough revenue to ensure we can continue to lead the fight against heart disease and stroke in the region.

GIVE NOW AND HELP US SAVE LIVES

BY PHONE: Call us on 091-544310, Mon - Fri from 9am - 5:30pm

ONLINE: Visit www.croi.ie/donate

Thank you for supporting Croí and the fight against heart disease and stroke.



Fighting Heart Disease & Stroke



Fighting Heart Disease & Stroke

Croí, The West of Ireland Cardiac and Stroke Foundation

Moyola Lane, Newcastle, Galway, H91 FF68

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