WHAT IS A STROKE AND HOW TO TREAT STROKE
One in five people have a stroke at some time in their life. Stroke can strike at any age. It could happen to you, a friend or family member.

Knowing what a stroke can do to a person can help to reduce its impact.

If the right actions are taken quickly after a stroke, a person may not have major long term disability.
Until recently many people, including doctors, believed that little or nothing could be done after a person had a stroke.

We now know that strokes can be treated. If the right actions are taken quickly after a stroke, a person may not have major long term disability.

Recognising the symptoms of stroke and getting medical treatment immediately is important.

This booklet explains:
• What stroke is.
• What causes stroke.
• How stroke can affect a person’s life.
• How stroke is treated.

**What is a stroke?**

“I woke up and suddenly I had a pain in my head. I couldn’t speak properly. I felt as though my ability to speak was just going from me. Then my sight went for a couple of minutes.”

*Marie Walsh, 34, Dublin.*

A stroke is a brain attack. It is caused by an interruption of the blood supply to part of your brain. If your brain stops getting important nutrients and oxygen from your blood, your brain cells can become damaged and die.

This can affect different parts of your body. For example, if a stroke damages the part of your brain that controls the movement of your limbs, you may not be able to move one of your arms or legs.

A stroke can also affect mental processes such as how you feel, think, communicate, or learn.
How do you recognise a stroke?

“How on the third morning since my headache began I woke up and I had no power in my left leg. I began to think that something more serious was going on.”

Trish Gavigan, 41, Mullingar.

How to Act F.A.S.T.

A simple test can help you recognise a stroke:

**Face:** Has the person's face fallen or drooped on one side? Can they smile?

**Arm:** Can they raise both arms and keep them there?

**Speech:** Is the person's speech slurred?

**Time:** It is time to call 999 if you see any single one of these signs.

Other stroke symptoms include:

- Numbness, weakness, or paralysis on one side of the body.
- Slurred speech, difficulty thinking of words or understanding other people.
- Confusion.
- Sudden blurred vision or sight loss.
- Being unsteady on your feet.
- Severe headache.

**FACT:** About one third of strokes in Ireland happen to people under 65 years of age.
What causes a stroke?

• Over 80 percent of strokes are caused by a blockage in an artery supplying blood to the brain. This is known as an ischaemic stroke. There are three main types of ischaemic stroke:
  1. A blood clot that forms in a main artery to your brain.
  2. 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. This is a cerebral embolism.
  3. A blockage that occurs in the tiny blood vessels deep in your brain. This is a lacunar stroke.

• Up to 20 percent of strokes are caused by a bleed into your brain from a burst blood vessel. This is called a cerebral haemorrhage.

• A transient ischaemic attack (TIA) or mini-stroke is a sudden and brief disturbance of your brain caused by small clots. Stroke symptoms from a TIA last less than 24 hours before going away.

TIAs do not cause any long term damage. However, they are a serious warning sign that you may have a full stroke in the near future. Approximately 10 percent of people with a TIA will have a stroke within a week and 20 percent of people will have a stroke within a month. TIAs should not be ignored and urgent medical attention is required.
“They found a hole in Michael’s heart. That was the problem. A blood clot went through the hole that went to his brain leading to the stroke”.

Therese McGovern talking about her husband Michael McGovern (39), Longford.

**FACT:** Risk of stroke is much higher for people who have had a stroke or TIA before. About 10% of people who have a stroke will have another stroke in the next 12 months.
Why does a stroke happen?

It may not be obvious why someone has had a stroke. Contrary to popular belief, stress – either long-term or after a sudden event – is not a major cause of stroke. A stroke can happen to anyone. Some people are at greater risk of stroke for reasons beyond their control, such as their age and family history. Research shows that people from Asian, African and African-Caribbean communities are more likely to have a stroke.

The good news is that by making small changes to your lifestyle and by taking medicines for certain conditions as directed by your doctor, you can reduce your risk of stroke.

Read more on how to prevent a stroke in our leaflet Preventing stroke.

To reduce your risk of stroke:
• Don’t smoke.
• Be physically active on a regular basis.
• Be a health weight.
• Cut down on salt and fatty foods.
• Eat plenty of fruit and vegetables.
• Control your blood pressure and cholesterol levels – get your doctor to check them regularly.
• Don’t drink too much alcohol.
• To find out more about reducing your risk of stroke, see our range of information leaflets: Lose weight, Quit smoking, Be active, Healthy eating, Manage your blood pressure, A healthy cholesterol, Manage your stress and Time to cut down on salt or contact the National Heart and Stroke Helpline on Local 1890 432 787.

FACT: Untreated high blood pressure is the biggest single risk factor for stroke.
Is there any treatment for stroke?

The stroke services in a hospital can help improve your recovery after a stroke. Stroke services can start medical care early and put a plan in place to reduce your risk of further strokes.

Drug treatment in the early hours after stroke may also help some people. Treatments such as the clot-busting drug thrombolysis aim to break up the blood clot with powerful blood thinners.

Do people recover after a stroke?
The brain needs time to heal and recovery can take many months. Recovery is different for each person. Some people may recover and have only a slight disability. Other people may have more serious disabilities. In general, most recovery is made in the first year, but you can still make progress after this time.

Unfortunately, some people will not recover from a stroke. People who are dying as a result of a stroke should be given end-of-life care.

FACT: Early diagnosis and treatment for stroke patients can mean the difference between life and death or mild and severe disability for the rest of their lives.
Stroke treatment in the hospital

“At the hospital I was met by the stroke physician. I had no pain and I wasn’t frightened but they told me my blood pressure was sky high. I was moved into intensive care for a few days. Then I was moved to the high dependency unit for three or four more days.”

Seamus Mills, 62, Artane, Dublin.

When you come to hospital after having a stroke you may be assessed in the emergency department.

This assessment is essential to ensure you get the correct emergency treatment. The assessment will check:

• What type of stroke you had, the area of your brain that was damaged and how serious the damage is.
• The condition of your heart and lungs.
• Problems you may have with swallowing.

You may then need to have a number of other tests including a brain scan, blood tests, blood pressure tests and an electrocardiogram (ECG).

These tests should be carried out as soon as possible. The earlier your stroke is diagnosed the better chance you have of making a good recovery.

Clot-busting drugs

Some strokes can be treated by thrombolysis, a clot-busting drug. This drug treatment is only effective if received within 4 ½ hours of the stroke starting. Thrombolysis is not suitable for everyone. Doctors should check if it would be a good treatment for you.
You may need to have a number of tests including a brain scan, blood test, blood pressure test and an electrocardiogram (ECG).
Swallowing
Difficulties swallowing are common in the first few days after stroke. If you find it hard to eat or drink, you may be referred to a speech and language therapist for an assessment and you might have another x-ray called a videofluoroscopy. While you are waiting to be assessed you may be given fluids through an intravenous drip. You might also be given insulin to keep your blood sugar levels stable. Some people will need to have a feeding tube inserted until it is safe for them to eat and drink.

FACT: It is estimated that more than 50,000 people in Ireland are living with stroke.

Hospital tests explained

Blood pressure: High blood pressure is the most common cause of stroke. Your blood pressure will be checked immediately. Doctors will give you medicine if you need it.

ECG (electrocardiogram): Irregular heart rhythms can increase your risk of stroke. This test checks your heart for unusual rhythms.

Blood tests: Samples of blood are taken to check your cholesterol levels, your blood’s ability to clot and your blood sugar levels.

Brain scan or CAT scan (computerised resonance imaging): This is an x-ray of your brain. You should have a brain scan within 24 hours of having a stroke.

MRI scans (magnetic resonance imaging) give a very detailed picture of your brain. For this test you will lie in a large tunnel-shaped scanner.
Carotid doppler ultrasound detects blockages in the carotid artery (in your neck) which may have caused the stroke. A probe is placed on the artery on your neck to check the blood flow.

Echocardiogram (Echo): A probe is moved over your chest to check the way your heart is working and to look for any problems.

Chest x-ray: This will help show the condition of your heart and lungs.

Videofluoroscopy Swallow Test: A swallow test may be carried out when you come to hospital. You might have another x-ray called a videofluoroscopy if you continue to have difficulties swallowing. This x-ray tests what food and drink you can swallow safely so that food and liquids don’t get lodged in your windpipe and lungs.
Stroke unit and stroke team

After a stroke you should be cared for in a specialist stroke unit. A stroke unit is a separate area of a hospital ward for stroke patients. It is staffed by a stroke team of doctors, nurses and therapists. If the hospital does not have a stroke unit you may be cared for in a general medical or rehabilitation ward.

In hospital, you should be cared for by a doctor who is an expert in stroke. This could be a geriatrician (a doctor who cares for older people), a neurologist or a rehabilitation physician.

Registrars and junior doctors will check on you regularly. A team of nurses will also care for you.

You must be closely monitored in the days and weeks after your stroke as complications can occur.

Your brain needs time to heal so nurses and doctors will work to prevent any complications. Once you are stable you will be assessed by a rehabilitation team. Rehabilitation should start soon after you come to hospital and continue throughout your hospital stay.

The rehabilitation team includes speech and language therapists, occupational therapists, physiotherapists, dieticians, nurses, psychologists and social workers. They work together to help you make the best recovery possible.

For more information on rehabilitation read our Stroke Rehabilitation leaflet.

FACT: Acute rehabilitation is available to just one in four people with stroke in Ireland.
Medical terms related to stroke

**Aneurysm**
This is a permanent abnormal balloon-like bulging of an artery wall. If an aneurysm bursts in an artery or blood vessel in your brain it will cause a haemorrhagic stroke.

**Aphasia**
Aphasia is a difficulty with language caused when areas of your brain that control language become damaged. Aphasia can affect the ability to talk or understand what is said, as well as the ability to read and write or spell, or understand spoken or written language. A person with aphasia may also have trouble with numbers or facial expression and gesture. Aphasia varies in type and severity. It does not affect your intelligence and can change over time.

**Apraxia and dyspraxia**
An inability to coordinate movements, because of damage to the brain, even though there is no damage to the muscles needed for the movement.

**Arrhythmia**
An irregular or unpredictable heart beat.

**Atrial fibrillation (AF)**
An abnormal heart rhythm where the pulse is irregular. AF can cause blood clots.

**Cerebellar stroke**
A stroke that strikes the cerebellum area of your brain, which controls balance and coordination.
Cerebrovascular
This is a term for the blood vessels of your brain. A stroke is a cerebrovascular accident.

CT scan
Computerised tomography or CT scan is a series of x-rays at different levels of your brain.

Dysarthria
Dysarthria occurs when the muscles you use for speaking are weak. People with dysarthria may have slurred speech or their voice may become soft or weak.

Dysphagia
Difficulty with swallowing.

Embolic stroke
A stroke resulting from the blockage of an artery by a blood clot (or embolus).

Haemorrhage
Bleeding into or around your brain.

Hemiparesis
Muscle weakness down one side of your body.

Infarct
The area of dead brain cells caused by disruption of the blood flow to your brain.

Intracerebral haemorrhage
A stroke caused by bleeding within your brain.

Ischaemia
An interruption or blockage of blood flow to your brain.
Lability
An uncontrollable outburst of emotion, such as laughing or crying without real cause. It may only last a few weeks, or continue for a long period.

Penumbra
An area of surviving brain cells surrounding the initial site of brain damage from stroke. The brain cells in the penumbra are at risk of permanent damage, but are not yet irreversibly damaged.

Perseveration
Getting stuck on one idea, action or response.

Rigidity
Loss of flexibility in thinking or movement.

Subarachnoid haemorrhage
A stroke caused by bleeding usually from an aneurysm. The bleeding usually occurs into the cerebrospinal fluid, the protective fluid layer around your brain.

Transient Ischaemic Attacks (TIAs)
TIAs, are temporary interruptions of the blood supply to an area of your brain, often caused by a carotid stenosis (narrowing of the artery). A TIA can last up to 24 hours, but most last only a few minutes and cause no permanent damage or disability. A TIA is sometimes called a mini stroke.
Please make a donation today

The Irish Heart Foundation is Ireland’s national charity dedicated to the reduction of death and disability from heart disease and stroke. Over 90% of our funding comes from public and business donations. We depend on your goodwill and generosity to continue our work.

If you found this booklet useful, please help our charity to continue to provide heart & stroke information by donating today.

You can make your donation today:

By post: Irish Heart Foundation,
50 Ringsend Road, Dublin 4

Online: www.irishheart.ie

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As part of your rights, you are entitled to a refund from your bank under the terms and conditions of your agreement with your bank. A refund must be claimed within 8 weeks starting from the date on which you account was debited. Your rights are explained in a statement that you can obtain from your bank.

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I would like to hear about other IHF events, activities, awareness campaigns and appeals. ☐ Yes

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Making lifestyle changes can reduce your risk of stroke.
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Funding:  
The Irish Heart Foundation is the national charity fighting heart disease and stroke and relies on charitable donations for 90 per cent of its funding. We support, educate and train people to save lives, campaign for patients, promote positive health strategies, support research and provide vital public information. We need your support – through donations, as a volunteer or on our training courses.

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