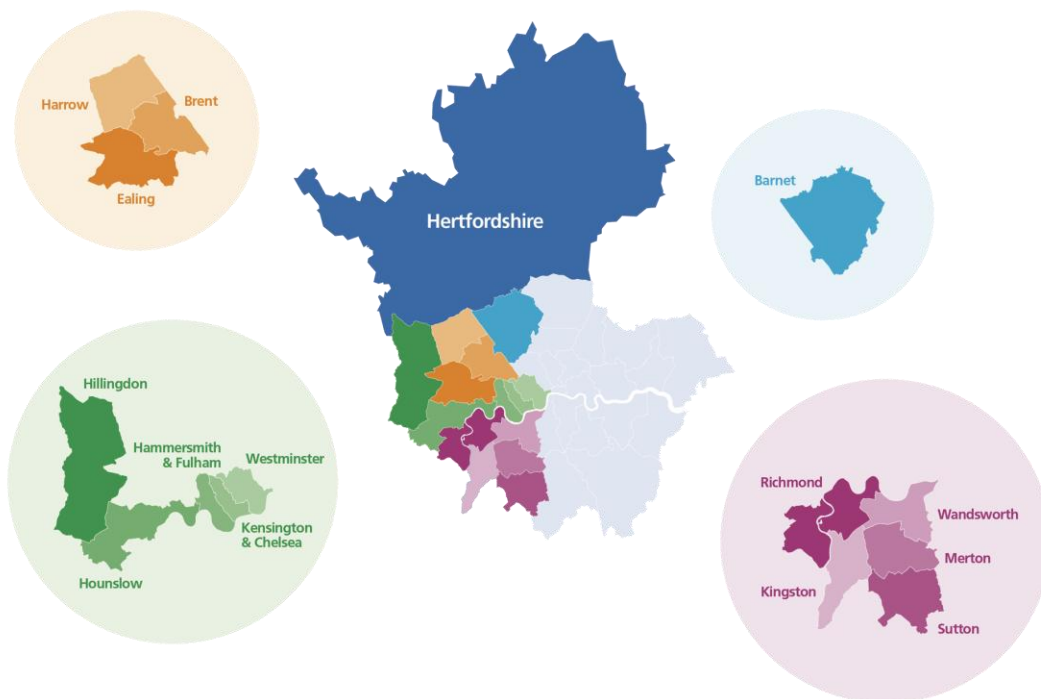


Recognising a Seizure and When to Call

an Ambulance

Presenter/date



Objectives

- Recognising some common seizure types
- Prevalence, Risk Factors
- Management in the Community
- Medications
- Living with Epilepsy
- Know appropriate first aid – what to do and what not to do
- To be able to recognise when a seizure becomes a medical emergency
- Alcohol Withdrawal Syndrome and Seizures
- Complications of Epilepsy
- Status Epilepticus
- Other causes of seizures

What is Epilepsy?

- A condition that affects the brain and causes repeated seizures
- It can start at any age
- One of the most common serious brain conditions in the world
- Almost 1 in 100 people in the UK have epilepsy
- It cannot be cured but medicines can help stop or reduce seizures
- Everybody's experience of epilepsy is different.
- Around 87 people are diagnosed with epilepsy everyday

Causes for developing Epilepsy

- Genetic factors – inherited genes or gene mutations (Dravet Syndrome or Lennox-Gastaut Syndrome)
- Structural Changes/Brain Damage – Strokes, traumatic brain injury, brain tumours, infections (such as meningitis, encephalitis, HIV)
- Developmental Disorders – brain development issues before birth, including genetic conditions such as tuberous sclerosis or neurofibromatosis
- Metabolic Abnormalities – rare conditions
- Immune System Disorders – autoimmune diseases can cause inflammation that could lead to seizures.
- Doesn't mean that everyone with these health problems will develop epilepsy and around half of all people with epilepsy there is no known cause.

What increases the risk of developing epilepsy?

- Being born very premature (can affect brain development)
- Being born with a brain abnormality
- Having a brain injury, brain infection, brain tumour or brain surgery
- Having severe febrile seizures as a child
- Family history of epilepsy
- Neurodevelopmental conditions such as ADHD, autism or learning disability
- Other medical conditions, including diabetes, high blood pressure, atrial fibrillation, stroke or dementia.

How is epilepsy treated?

- Main treatment is medications, sometimes called anti-seizure or anti-epileptic drugs.
- Medicine doesn't cure epilepsy but can help stop or reduce the number of seizures someone has
- About half of people with epilepsy have their seizures stop with their first medication whilst other people need to try a few to get the right one. Some people may need to take 2 or more epilepsy medicines together.
- About 3 in 10 people with epilepsy have seizures that don't respond well to medicines and continue to have seizures, sometimes known as drug-resistant epilepsy.

How is epilepsy treated?

- If medications don't work there are other treatment options which include:
- Ketogenic Diet
- Epilepsy Surgery
- Vagus Nerve Stimulation
- EASEE – for those with focal seizures

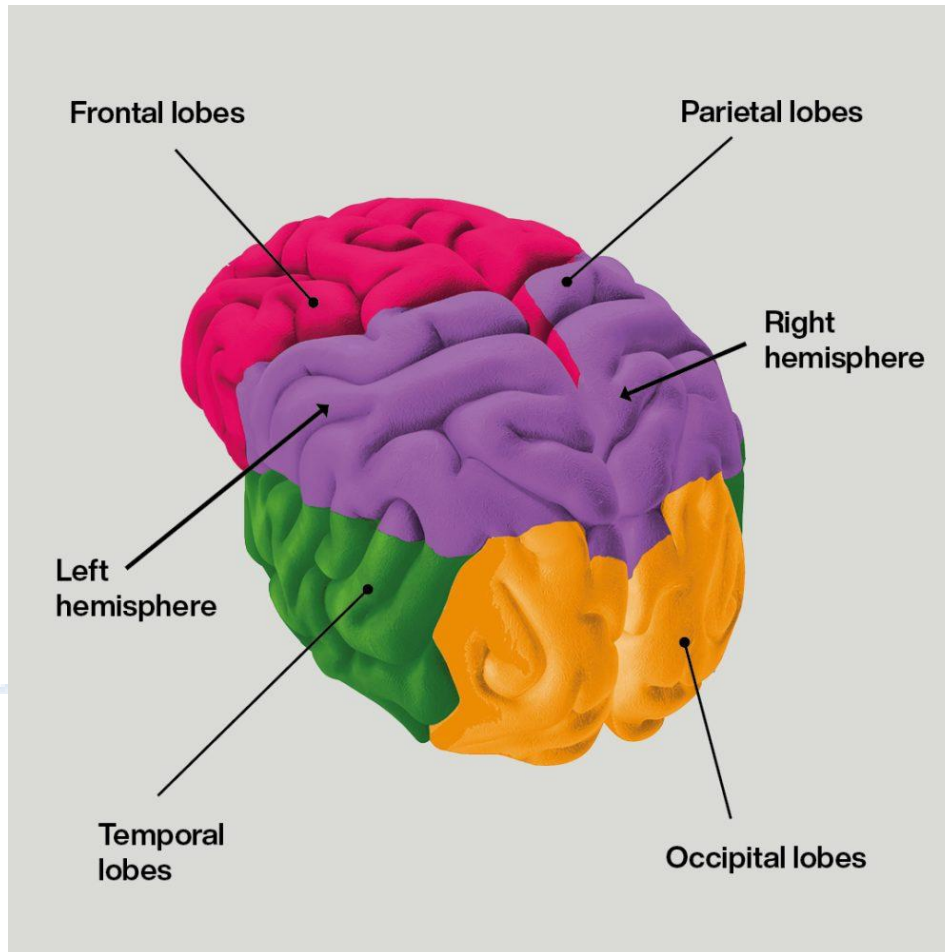
What is a seizure?

- When our body does something we cannot control
- A seizure is a sudden burst of electrical activity in the brain that can alter one or more of the following:
 - Movement
 - Sensation
 - Behaviour
 - Awareness

Seizure Types

- **Partial Seizures:**
 - Involve only part of the brain
 - Common types include absence and focal seizures
 - Symptoms relate to the part of the brain affected
- **Generalised Seizures:**
 - Involve the whole brain
 - These are more serious and known as Tonic-Clonic seizures
 - Symptoms are usually loss of consciousness, a fall and convulsions

Focal Seizures



Temporal Lobe Focal Seizures

Temporal Lobe Seizures Symptoms:

- Feeling frightened
- Feeling like what's happening has happened before (déjà vu)
- Hearing things that aren't there
- Experiencing an unpleasant taste or smell
- Having a rising sensation in your stomach
- Lip smacking, repeated swallowing or chewing
- Changes to your skin colour or heart rate
- Automatic behaviours such as fidgeting, undressing, running or walking
- You may feel confused or find it hard to speak for a short time after a temporal lobe seizure.

Frontal Lobe Focal Seizures

Symptoms during a frontal lobe seizure:

- Pelvic thrusting, kicking, pedalling, thrashing or rocking movements
- Screaming, swearing or laughing
- Unintentionally passing urine (urinary incontinence)
- Your head or eyes turning to one side
- Having unusual body movements, such as stretching one arm while the other bends
- Twitching, jerking or stiffening of muscles in one area of your body. The movements may sometimes spread bit by bit to other areas

Occipital Lobe Focal Seizures

Seizures starting in the occipital lobe often spread to involve other lobes. Here are some symptoms that can happen during an occipital lobe focal seizure:

- Seeing flashing lights, colours or simple patterns
- Seeing more complex images, such as pictures of people, animals or scenes
- Not being able to see as well as usual, or not being able to see at all
- Eye movements you can't control. These might be your eyes closing, moving to one side, or moving quickly from side-to-side
- Repeated blinking

Parietal Lobe Focal Seizures

Seizures starting in the parietal lobes often spread to involve other lobes. Here are some things that might happen during a parietal lobe focal seizure:

- Having feelings of numbness or tingling
- Prickling, crawling or electric-shock sensations. These may spread along the affected body part
- Sensations of burning, cold or pain
- Feeling like part or all of your body is moving or floating
- Feeling like a body part has shrunk, become bigger or is missing
- Sexual sensations
- Difficulty understanding language, reading, writing or doing simple maths
- Seeing things as bigger or smaller than they really are or seeing things that aren't there. These types of symptoms can sometimes be called [Alice in Wonderland syndrome](#)

Focal Seizures

- Most focal seizures are short, usually lasting between a few seconds and a few minutes but it will be different for each person
- **27 seconds Average length of focal seizure with preserved consciousness**
- **43 seconds Average length of focal seizure with impaired consciousness**

What happens after a focal seizure?

- Some people feel fine straight away
- Some may need time to recover and may feel confused or tired
- The time after a seizure is sometimes called the 'post-ictal phase'
- Some people may have temporary weakness or can't move part of their body after the seizure (Todd's Paralysis) but is time limited but can range from a few minutes up to 36 hours.

Tonic-Clonic Seizures

- This is the type of seizure most people recognise
- Tonic Phase – someone will go stiff and fall
- Clonic Phase – limbs start to jerk quickly and rhythmically

Generalised Tonic-Clonic Seizures

- These seizures have a generalised onset; it involves both sides of the brain from the start and the person will go straight into a tonic-clonic seizure
- Sometimes a focal seizure can turn into a tonic-clonic seizure (this is called a 'focal to tonic-clonic seizure')

What happens during a tonic-clonic seizure?

During the tonic phase:

- Loss of consciousness
- Muscles go stiff, and if the person is standing, they will fall to the floor
- Air might push past the voice box, which can sound like the person is crying out
- They may bite their tongue or inside of their mouth

During the clonic phase:

- The limbs will jerk quickly and rhythmically
- Possible loss of bowel and bladder control
- Breathing may be affected which could cause a blue tinge around the mouth, or could turn grey if they person has black or brown skin.

How long do tonic-clonic seizures last?

- Most tonic-clonic seizures last between 1 and 3 minutes
- If a seizure lasts more than 5 minutes this is called status epilepticus

What happens after a tonic-clonic seizure?

People have different symptoms during the post-ictal phase, and they can last minutes, hours or days

- They may have a headache, feel sore, tired and unwell
- Feel confused or have memory problems
- Go into a deep sleep, but when they wake up may still feel sore or unwell
- May feel confused and scared or act in unusual ways
- Some people may experience psychosis after a seizure
- Recovery after a seizure is different for everyone, some people feel better after an hour, but it can take several days to feel 'back to normal'

First Aid – Tonic Clonic Seizure

- Stay calm and time the seizure
- Remove possible hazards (neck ties, chairs, tables, sharp objects)
- Cushion the head (use hand if nothing else available)
- Check for Epilepsy or seizure I.D bracelet, necklace, card
- When the seizure ends, turn the patient in to the recovery position
- Stay with the person until they have recovered from the seizure and offer support
- If the person has wet themselves, put a blanket or piece of clothing over them once they've recovered for their dignity

First Aid – Focal Seizures

- **For people having a focal seizure** (for example unusual movements or behaviour, wandering):
 - Protect them from injury by removing harmful objects from nearby, or if this is not possible, moving them away from immediate danger.
 - Do not restrain them.
 - Observe them until they have fully recovered — do not give them anything to eat or drink until they have made a full recovery.
 - Reassure them and explain anything they may have missed.
 - Examine for, and manage, any injuries.
 - Call for an ambulance if it is their first seizure, the seizure continues for more than 5 minutes, or they need urgent medical attention.



1. Stay with the person and ensure they are safe



2. Guide the person away from any danger

3. Stay calm and reassuring



4. Stay with the person until they are fully recovered



Recovery Position

- Lay the arm nearest to you out to the side and flat on the floor so it is at a right angle to the body
- Bring the other arm across the person's chest and tuck their hand under their cheek
- Bring the knee furthest away from you into a right angle, so the foot is flat on the floor
- Pull on the knee, rolling the person towards you onto their side, whilst protecting their head with the other hand
- Adjust the top leg so that it's at a right angle and the person can't roll onto their back
- Tilt their head back slightly to keep their airway open
- Stay with them until they are fully recovered

Recovery Position



What NOT to do

- DO NOT put anything in the patient's mouth
- DO NOT hold down or restrain
- DO NOT attempt to give oral medications, food or drink during a seizure
- DO NOT move them, unless they are in danger

How is Epilepsy managed in the community?

- First Fit Clinic referral made by GP, A&E doctor or inpatient medical team
- Routine review in primary care (GP or practice nurse)
- Access to anti-seizure medications
- Personalised care plans
- RightCare: Epilepsy Toolkit
- Support for independent living

Complications of epilepsy

- **Reduced quality of life**
- **Mental health comorbidities**
- **Developmental and cognitive problems**
- **Status Epilepticus**
- **Injuries and epilepsy-related death**
- **Sudden unexpected death in epilepsy (SUDEP)**

Other causes of seizures

- Metabolic imbalances: hypoglycaemia, abnormal levels of sodium, calcium or magnesium
- High fever (more common in young children)
- Substance Use or withdrawal
- Infections
- Oxygen deprivation
- Stroke / Head injury
- Functional (dissociative) seizures

Alcohol Withdrawal Syndrome

- Hand tremors ('the shakes')
- Profuse Sweating
- Fast pulse
- Nausea / Vomiting
- Headaches
- Anxiety
- Restless / Agitated
- Palpitations
- Craving for alcohol
- Insomnia (difficulty sleeping)

Alcohol Withdrawal Syndrome

- Severe symptoms can additionally include:
 - Hallucinations (visual, audible or tactile)
 - Seizures
 - Delerium Tremens

Alcohol Withdrawal Seizures

- Majority of people have seizures within 24 – 48 hours after stopping drinking
- However, they can start as quickly as 2 hours following a persons last drink
- High risk of seizures if someone has had multiple detox's in the past
- They are generalised under the name Tonic-Clonic seizures
- Will most likely need medication to stop seizures from happening again (this needs to be done in a hospital setting)

When is a seizure an emergency?

- If the seizure lasts **more than** 5 minutes
- If one seizure follows another before they have fully recovered
- If it is the persons first seizure
- If they are injured, diabetic or pregnant
- If a normal breathing pattern does not resume or they have difficulty breathing
- They have had 3 or more seizures in the past 24 hours

Helpful information for calling 999

- Was there any loss of consciousness?
- Did the person's colour change? Did the person's breathing change?
- How long did the seizure last?
- Did the person lose control of their bladder or bowel?
- Did they bite their tongue?

REMEMBER

If YOU are in ANY doubt...

Call for an ambulance!

More information

- <https://www.epilepsy.org.uk/info/firstaid/what-to-do>
- <https://www.youtube.com/watch?v=gWZGMABBfYo> This is a real seizure which really shows you what someone may look like which is why they can be quite intimidating to manage
- <https://www.youtube.com/watch?v=rTWGEfHrWNE> another seizure which is really interesting to see his slow recovery

References

- <https://www.drinkaware.co.uk/facts/health-effects-of-alcohol/general-health-effects/alcohol-withdrawal-symptoms>
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