my MS roadmap

Lexicon

This resource is designed to help you better understand the language used to describe MS; from diagnosis, through to starting treatment, and beyond.

How to use this lexicon

This document contains a lexicon of terms that you may hear when discussing MS and definitions to help you understand what they mean.

Terms are organized into 3 categories:

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Lexicon of terms

MS biology

Action potential and nerve impulse

Nerves are bundles of 'wires' (neurons) that connect the CNS with other parts of the body. They carry messages or 'nerve impulses', which are generated by changes in electrical activity in your neurons. An 'action potential' is the 'wave' of changes in electrical activity that allows the impulse to travel along the nerve in the right direction.

Antibody

An antibody is a protein in your immune system that identifies and latches onto antigens (structures on the surface of bacteria/viruses – also called 'pathogens') in order to signal your body to fight. Some antibodies destroy the pathogen themselves, while others signal for white blood cells to come and destroy the pathogen instead.

Astrogliosis

Astrogliosis is a process that happens when neurons become damaged. Your body reacts by producing an abnormally high number of cells called 'astrocytes' that then form a glial scar or 'lesion' around the damaged area. This scar is designed to protect the neurons from any further damage and support the healing process.

Atrophy (of the brain)

Atrophy in the brain describes the loss of neurons, or the connections between them. It is either 'generalized' meaning cells are being lost in various different places in the brain, or it is 'focal' meaning it is happening in smaller, more specific areas.

Autoimmune

Autoimmune diseases are conditions caused by your own immune system mistakenly attacking healthy parts of your body. In MS, the immune system attacks the protective coating called myelin that surrounds your nerves and helps them to function properly.

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Axon

Axons are the part of your nerve cells (neurons) that behave like wires, carrying messages between your CNS and other parts of your body.

Blood-brain barrier (BBB)

The BBB is a protective layer of tightly packed cells that stops poisons, some medicines, immune cells and germs or 'pathogens' from reaching your brain. Damage to the BBB may allow immune cells to get into your brain, and as they might not recognize the cells they come across there, they may mistakenly attack healthy tissues.

Central nervous system (CNS)

Your CNS is made up of your brain and spinal cord.

Cerebrospinal fluid (CSF)

CSF is the colorless, clear fluid surrounding your brain and spinal cord. It acts as a shock absorber.

Clinically isolated syndrome (CIS)

CIS is the term used to describe an episode of MS-like symptoms that lasts for at least 24 hours. This may turn out to be the first sign of MS; however, 20% of people do not go on to receive an MS diagnosis even after several decades.

Cognitive reserve

When parts of the CNS are damaged by MS, creating lesions or scars, you do not always develop a new symptom (see silent lesions). This is because of cognitive reserve – you can think of this as your brain's 'flexibility' or 'adaptability'. If you have a good cognitive reserve, your brain will find ways to overcome the damage, for example by sending messages via different routes.

Cranial nerves

Cranial nerves directly connect the brain to other parts of the body.

Demyelination

Inflammation in MS can cause damage to the myelin covering your nerves, as well as to oligodendrocytes, the cells in your CNS that make myelin. The result is that your nerves either do not get coated properly or become uncoated. This is called demyelination and it delays or blocks nerve signals from your brain.

Epstein-Barr virus

EBV is one of the most common viruses in the world. Research is ongoing, but it thought to increase a person's risk of getting MS. Other known risk factors include vitamin D deficiency and smoking.

Genetic risk

This is your chance of inheriting a disorder or disease. In the case of MS, there is no genetic risk; however, it is more likely to see MS develop in an individual who has a biological relative with the condition.

Gray matter

'Gray matter' can be used to describe the parts of your CNS that are NOT surrounded by myelin. This includes the 'bodies' of neurons. Everything in the CNS is either gray matter or white matter.

Hereditary

Hereditary means that a condition is passed down from a parent to their child. MS is not typically considered a hereditary condition; however, investigations are ongoing.

Immune system

The immune system is composed of cells and proteins that act as your body's defense against infection. T cells and B cells – two types of white blood cells also known as 'leukocytes' – play a particularly important role in triggering your body's response to infection. In MS, these cells mistakenly trigger a response against the protective coating called myelin that surrounds your nerves and helps them to function properly. This is called an autoimmune response.

Immunosuppression

As MS is considered an autoimmune disease, some disease-modifying therapies work by suppressing your immune system. This helps to reduce the impact of unwanted attacks on the myelin surrounding your nerves.

Inflammation

Inflammation is localized swelling created when the immune system responds to damage. It is caused by increased blood flow to the area, in order to deliver antibodies for defense and proteins for recovery. This response is normally a positive process; however, in MS, it can be a sign of disease activity. Inflammation is the cause of some of the most common MS symptoms, such as neuropathic or musculoskeletal pain, numbness and fatigue.

Lesion or plaque

When your brain or spinal cord become damaged as a result of inflammation, scars known as lesions (or plaques) develop. These can be seen on MRIs. The literal translation of MS means 'many scars' (sclerosis is Greek for 'scar', multiple means 'many').

Multiple sclerosis (MS)

MS is a neurodegenerative autoimmune condition that develops when your own immune system mistakenly attacks healthy parts of your body; in this case, the protective coating called myelin that surrounds your nerves and helps them to function properly. It is usually accepted that there are three main types of MS – relapsing-remitting, primary progressive and secondary progressive – although you may also hear it described as ‘active’ or ‘smoldering’ too.

Myelin

Myelin is a fatty tissue that surrounds your nerves, like insulation surrounds a wire. It serves the same purpose too, helping messages from your brain to travel along the nerves more effectively. Inflammation in MS damages myelin, which interrupts the signals or messages and, in turn, causes MS symptoms.

Nerves

Nerves are bundles of 'wires' (neurons) that connect your CNS with other parts of the body. They are split into two categories: sensory ('feeling') and motor ('moving').

Neurodegenerative

Neurodegenerative diseases are caused when neurons, the cells in your CNS, die or don't work properly. This can happen for a number of reasons, for example as a result of an infection or the malfunctioning of your immune system. MS in an autoimmune condition as well as a neurodegenerative disease.

Neuron

The cells that make up your CNS are called neurons. These have two main parts: a body, which controls the cell, and an axon or 'nerve fiber', which is like a wire that carries messages between your CNS and other parts of your body. A bundle of these cells together makes up a nerve.

Neurotransmitters

Neurotransmitters are chemicals used by neurons to send messages to other cells.

Oligodendrocytes

Oligodendrocytes are the cells in your CNS that produce the myelin needed for healthy and fast transmission of nerve signals around the body.

Remyelination

Once inflammation during a relapse ends, oligodendrocytes work to replace the damaged myelin. This is called remyelination. However, new myelin tends to be thin and so nerve signals may be slower.

Spinal nerves

Spinal nerves directly connect the spine to other parts of the body. There are five different types: cervical (near your neck), thoracic (in your mid back), lumbar (in your lower back), sacral (around your pelvis) and coccygeal (right at the bottom of your spine, in your tail bone).

White blood cells or leukocytes

Your blood is made up of red cells (that carry oxygen around your body) and white cells, which are an important part of your immune system. These white cells help your body fight bacteria/viruses (also called 'pathogens'), either by producing antibodies to fight the infection, or by directly killing pathogens or infected cells of your body.

White matter

'White matter' can be used to describe the parts of your CNS that are surrounded by myelin. Myelin is a type of fat and so appears white. Everything in the CNS is either white matter or gray matter.

Symptoms

Allodynia

Allodynia is a feeling of pain in response to something touching your skin that would not normally cause pain. This can be thought of as similar to the increased sensitivity of badly sunburned skin.

Ataxia

Ataxia refers to a group of disorders that can affect coordination of your muscle movements. Symptoms can include clumsiness or feeling unsteady when walking, as well as problems with speech, eye and arm/leg movements. You might need to see different therapists, which could include a physical therapist, speech and language therapist (SALT) or occupational therapist.

Bladder incontinence

Bladder (or urinary) incontinence is a loss of bladder control, which can lead to a frequent need to urinate as well as accidental leaks. In MS this may be a result of damage to the parts of your CNS that control emptying of the bladder, or weakening of the muscles that control pressure in the bladder.

Bowel incontinence

Bowel (or fecal) incontinence is a loss of control over when your bowel movements occur and, in MS, is most commonly a side effect of constipation. As with bladder incontinence, other MS symptoms, including muscle weakness, loss of sensation and reduced mobility, can be contributing factors.

Clinically isolated syndrome (CIS)

CIS is the term used to describe an episode of MS-like symptoms that lasts for at least 24 hours. This may turn out to be the first sign of MS; however, 20% of people do not go on to receive an MS diagnosis even after several decades.

Cognition

Cognition refers to all sorts of 'thinking' processes, such as attention, learning, reasoning, memory, understanding, planning and making decisions. About half of people with MS experience changes in their cognitive abilities. Sometimes people with MS describe the experience as having 'brain fog', when they may be struggling to organize their thoughts.

Dexterity

Dexterity describes how easily you are able to do a task, usually using your hands. This can be affected by MS, and so your doctor may measure any changes using a nine-hole peg test.

Dysesthesia

Dysesthesia is a more intense version of paresthesia. It is an abnormal sensation such as tingling, 'pins and needles,' burning, or tightness around the body.

Dysarthria

Dysarthria is a speech problem caused by a difficulty in controlling the movement of your tongue, which can make people slur their words. If you experience this, it may be helpful to see a speech and language therapist (SALT).

Dysphagia

Dysphagia is difficulty swallowing. The mechanisms behind swallowing are similar to those that control speech; therefore, as with dysarthria, the management of this symptom may be handled by a speech therapist.

Dysphasia

Dysphasia describes a difficulty in remembering or recognizing words. It is related to comprehension (understanding) rather than a physical issue (as seen with dysarthria).

Emotional lability (pseudobulbar affect)

Sometimes, MS may affect the part of your brain that controls emotions. You may find yourself crying, even when you aren't unhappy, or experiencing unusual, intense emotional responses to situations. Your doctor can talk to you about treatment options if you are experiencing emotional lability.

Fatigue

Fatigue is one of the most common symptoms of MS. Unlike the everyday tiredness that you might feel after a busy day, fatigue can leave you feeling exhausted out of proportion to your activity – a night's sleep may not leave you refreshed. This is totally normal. Your doctor can help you find ways to cope, such as pacing yourself, and planning, prioritizing and delegating tasks.

Foot drop

Foot drop describes a difficulty in lifting the front of your foot clear of the ground when walking. This is caused by muscle weakness or nerve problems in the ankle and can cause people with MS to trip or drag their feet, decreasing mobility. A member of your healthcare team may be able to observe and diagnose this symptom during a timed 25-foot walk (T25-FW) or similar mobility assessment.

Gait

A person's gait is their 'style' of walking (i.e. how their arms and legs move).

Heat intolerance

You might find that heat can worsen some of your MS symptoms (known as Uhthoff's phenomenon). This is because temperature can affect nerve conduction (how effective your nerves are at sending messages).

Lhermitte's sign

Lhermitte's sign is a sudden sensation, like an 'electric shock' that runs down your body, starting from the neck. Bending the head towards the chest is the most common trigger for this symptom.

MS hug

Some people with MS experience a feeling of tightness or pressure around their body – usually around the chest. While this symptom isn't dangerous, if you go on to experience chest pain or difficulty breathing, make sure to seek medical attention immediately as this may indicate an issue unrelated to your MS.

Mobility

Your mobility is your ability to move your body freely.

Musculoskeletal pain

Musculoskeletal pain is a pain caused by damage to your muscles, ligaments, tendons and other soft tissue. Musculoskeletal pain in MS may feel like a sprain or pulled muscle.

Neuropathic pain

Neuropathic pain is a pain caused by damage to your nerves. In MS, nerve damage disrupts normal signals, and your brain may interpret this change as pain or paresthesia (sensations such as numbness, pins and needles, crawling or burning).

Neutropenia

Neutropenia is the presence of an unusually low level of neutrophils, a type of white blood cell that helps you to fight infections. This can be caused by some disease-modifying therapies.

Nocturia

Nocturia is the need to urinate frequently throughout the night, and is caused by MS-related bladder incontinence. This can lead to disturbed sleep and increased feelings of tiredness and fatigue.

Numbness

This is a loss or change in sensation when you touch something. Numbness is common in MS. You may experience numbness in your hands, feet, or torso. This isn't usually permanent and tends to come and go over time.

Nystagmus

Nystagmus is used to describe involuntary eye movements. See also tremor.

Optic neuritis

Optic neuritis is a common early symptom of MS. It is caused by inflammation of the optic nerve, which carries messages from your eyes to your brain. This inflammation can cause blind spots or areas of poor vision, but these are usually temporary, and most people fully recover.

Oscillopsia

Oscillopsia makes your vision appear to be 'wiggling' horizontally or vertically. It may occur in one or both eyes and can affect your vision and balance.

Paresthesia

Paresthesia is a tingling or ‘pins and needles’- type feeling that you might experience with your MS as a result of damage to nerves in your body.

Progressive multifocal leukoencephalopathy (PML)

PML is a rare but usually fatal condition caused by the John Cunningham (JC) virus. Some disease-modifying therapies suppress the immune system and increase the likelihood of you contracting the JC virus. As such, before and during treatment, your healthcare team will test your blood for the presence of JC virus antibodies. If these tests come back negative, your chances of developing PML while on treatment are less than 1 in 10,000.

Relapse

A relapse (also sometimes called an 'attack', 'exacerbation' or 'flare') is a short period of time (at least 24 hours) in which you experience new or worsened symptoms. These symptoms then get better or even disappear again. If symptoms get better but do not fully go away, the impact this has on you is called residual disability.

Sexual dysfunction

Both men and women with MS may experience reduced libido or have difficulties reaching orgasm; however, sexual dysfunction is also relatively common in the general population and so may not necessarily be a symptom of MS. Counselling, medicines and other treatments could help, so don't be shy: speak to your doctor.

Silent lesions

Sometimes when you have an MRI, you might see new lesions on your scan even though you haven't developed any new symptoms. These are called silent lesions. Your brain is very flexible and sometimes it is able to send signals via new routes to bypass the damage. It is thought that 8 or 9 in every 10 new lesions may be silent.

Spasticity

If you have MS, your muscles may sometimes feel stiff and heavy, or may be difficult to move; this is known as spasticity. This can be caused by damage to the nerves connecting your body and brain. Which muscle is affected will be dependent on where the damaged nerve is.

Speech problems

This includes problems with speaking, such as slurring, changes in the sound of your voice (dysarthria) or difficulty remembering certain words (dysphasia). These symptoms are quite common and for many people are very mild, lasting for only a short time. A speech and language therapist (SALT) may be able to help you, should speech problems develop.

Tremor

A tremor is a shake that you cannot control. This is caused by nerve damage interrupting the normal signaling between your brain and muscles. This might happen only when you move (intention tremor), when sitting still or in your eyes (nystagmus).

Trigeminal neuralgia

The trigeminal nerve is found in your jaw. If it becomes damaged this can cause altered sensations, such as pain, burning or numbness in your face (trigeminal neuralgia). This usually affects only one side of the face at any given time and, as a result of the location, people with MS can often mistakenly think that the sensations are caused by dental issues.

Urinary tract infection (UTI)

A UTI is an infection in your urinary system, which begins in your kidneys and ends in the urethra (the tube that you pass urine or 'pee' through). UTIs can worsen some MS symptoms and, if untreated, may trigger a relapse in your MS. If you suspect you have a UTI it is important to talk to your doctor.

Vertigo

Vertigo is a feeling of dizziness brought on by problems with your body's sense of balance. Along with other symptoms, a lack of balance can lead to reduced mobility in people with MS.

Visuospatial problems

Visuospatial problems happen when your brain struggles to accurately interpret what you are seeing and move your body accordingly. For example, you might bump into the frame as you walk through a door or find picking things up difficult. See also optic neuritis and nystagmus.

Tests

Blood tests

Analysis of a blood sample can help to assess your general health, identify infections and measure how well your organs are working. Blood tests can also be used to monitor your body's response to medication for safety monitoring and to check for side effects. In addition to this, they can be used to rule out other causes for MS-like symptoms.

Brief International Cognitive Assessment for MS (BICAMS)

BICAMS is a collection of tests designed to measure changes in your cognitive function.

Computerized Axial Tomography (CAT scan)

A CAT scan creates images of the structures inside your body by processing the results of multiple x-rays. In MS, this process is vital as it allows the healthcare team to see MS lesions in the brain or spine from different angles.

Evoked potential tests

Evoked potential tests measure the speed at which nerves transmit messages from your environment (e.g. what you are seeing, hearing or feeling/touching) to the brain. This can help with diagnosis of MS, as the damage to myelin in people with MS can make messages travel slower along the nerves.

Expanded Disability Status Scale (EDSS)

The EDSS measures the level of disability experienced by a person with MS. Your doctor may assess different things, such as muscle weakness, coordination and eyesight. Based on this, they calculate a score between 0 and 10.

Gadolinium

Gadolinium is a chemical that is injected into the body to enhance MRI images. Gadolinium highlights areas of active inflammation. The technique allows your doctor to tell which lesions are new or growing and which are old, scarred areas.

Lumbar puncture or spinal tap

A lumbar puncture (also known as a spinal tap) is a procedure in which a needle is used to take cerebrospinal fluid from the lower spine. Analysis of this fluid can help to diagnose MS as it allows your doctor to identify changes in your immune system, for example increased levels of white blood cells or certain antibodies.

Magnetic resonance imaging (MRI)

MRI scanning is a medical imaging technique that uses magnetic fields to create an image of your brain or spinal cord (or another part of your body). MRIs are often used to diagnose MS as they allow your doctor to see if you have developed any demyelinating lesions, which appear as white or black spots on the scan, depending on the type used.

Magnetic resonance imaging (MRI): FLAIR

Cerebrospinal fluid can darken an MRI image. Fluid-attenuated inversion recovery (FLAIR) is a sensitive MRI technique that detects MS lesions as bright spots despite nearby cerebrospinal fluid.

Magnetic resonance imaging (MRI): T1 weighted scan

The MRI: T1 weighted scan shows areas of nerve loss and damage as dark areas on the image. It can also show areas of fluid (edema).

Magnetic resonance imaging (MRI): T2 weighted scan

The MRI: T2 weighted scan is the most common type of MRI scan. Lesions appear as bright spots on scans using this technique. This helps your doctor to determine how seriously your MS has damaged the CNS (known as lesion load).

Multiple Sclerosis Quality of Life Inventory (MSQLI)

MSLQI is a collection of tests designed to measure your quality of life.

Nine-hole peg test

The nine-hole peg test assesses your dexterity. During the test, you would be asked to put nine pegs into a block containing nine holes and then remove these again as quickly as possible and one at a time. The time taken for this exercise can help doctors to understand any changes in your physical abilities.

Optical coherence tomography (OCT)

OCT uses light to scan your eyes and produce images of the various layers of the retina (a thin layer of tissue at the back of the inside of the eye). This can help an ophthalmologist (eye doctor) diagnose eye problems.

Positron emission tomography (PET)

PET is a technique that uses a radioactive drug (tracer) to show how your organs and tissues are working. The tracer is injected into your blood and is used by the PET scanner to produce three-dimensional images of your body's insides. It can measure many bodily functions, such as blood flow and levels of neurotransmitters.

Timed 25-foot walk (T25-FW)

T25-FW is a test you can do at home to monitor any changes in your mobility. This is done by walking 25 feet, as quickly as you can, twice back-to-back, and measuring how long it takes you.

Types of MS and Treatment

Caregiver/care partner

A caregiver, or care partner, is not necessarily someone who provides physical care for you. Partners, family members and friends may provide emotional support or help with your treatment and daily activities. Some people may find it helpful to take caregivers to appointments with them as it can help to have a friendly face in the room, particularly when making important decisions or having difficult conversations.

Cognitive behavioral therapy (CBT)

Around 1 in 3 people with MS may experience depression or anxiety, but a 'talking' therapy like CBT could help. CBT helps you consider which thoughts, feelings, and actions are helpful, and which are counterproductive and your therapist can help you develop strategies to remain more positive.

Complementary and alternative medicines (CAMs)

Between 1 in 3 and 1 in 2 people with MS use at least one CAM regularly, such as aromatherapy, herbal medicine, or mindfulness and meditation. CAMs can offer direct medical benefits, alleviate stress, or offer psychological help. Always tell your doctor if you plan to use a CAM as some can interact negatively with your MS therapies.

Disease-modifying therapy (DMT)

A DMT may work to change the course of your MS over the long term, to reduce the severity and number of relapses you experience, and to slow accumulation of disability. There are a growing number of effective DMTs available, and a variety of other medicines and non-drug treatments can be used to treat or alleviate symptoms.

First-line treatment

This simply means the first treatment prescribed for your MS. This will usually refer to your disease-modifying therapy rather than, for example, any symptomatic treatments you may have had, such as steroids.

Hematopoietic stem cell transplantation (HSCT)

HSCT is a treatment option for MS that aims to essentially 'reboot' your immune system. Hematopoietic stem cells are your natural source of white blood cells, which are needed to protect you from infection; however, if you have MS, your white blood cells mistakenly attack your CNS instead. HSCT removes the stem cells that are creating the damaging white blood cells and replaces them with healthy ones.

Immunosuppression

As MS is considered an autoimmune disease, some disease-modifying therapies work by suppressing your immune system. This helps to reduce the impact of unwanted attacks on the myelin surrounding your nerves.

Infusion

This is the process of administering a drug via a needle into a vein, usually in your arm. Some disease-modifying therapies for MS are taken in this way, while others are taken orally (by mouth) or injected.

Multidisciplinary team (MDT)

As MS can affect many different parts of the body, your doctor may form what is called an 'MDT' in order to discuss your symptoms with a range of different doctors, nurses and other health professionals with different specialisms. This will help them to make the best and most well-informed decisions about your care and treatment.

Physical therapist

Physical therapists look at the physical difficulties you may experience and work with you to improve your movement and stability. Physical therapists will tailor exercises for you to meet your needs and abilities. Therefore, these exercises may focus on a particular area of your body or on a particular problem caused by your MS.

Primary progressive MS (PPMS)

PPMS is the least common type of MS, affecting about 10-15% of people with MS. It is characterized by a worsening of symptoms from the beginning, without early relapses or remission periods.

Progression

Progression in MS can be difficult to define and is not necessarily the same as being diagnosed with 'progressive MS'. Instead, it refers to the fact that your MS is always changing. These changes might be the development of a new symptom or the worsening of existing symptoms and are usually independent from a relapse.

Progressive MS

Progressive MS is a type of MS where symptoms gradually worsen over time, without periods of remission in between. MS may be progressive from diagnosis (primary progressive MS) or may become progressive after a period of relapsing-remitting MS (secondary progressive MS).

Relapsing-remitting MS (RRMS)

RRMS is the most common type of MS, affecting around 85% of people with MS. It is characterized by the person experiencing relapses (development of new or worsening symptoms), followed by periods of recovery or 'remission' when symptoms get better or even disappear again. If they get better but do not fully go away, the impact that this has on you is called residual disability.

Secondary progressive MS (SPMS)

Some, but not all, people originally diagnosed with relapsing-remitting MS may progress to SPMS. This means that their disease course has changed, and rather than experiencing relapses, their symptoms now gradually worsen over time, without periods of remission in between.

Second-line treatment

The first treatment you are given for a disease is called a first-line treatment. This is the most preferential treatment based on effectiveness and risk. If you change your treatment with the aim of improving effectiveness but potentially increase the risks, this is called a second-line treatment. If you switch again, this would be a third-line treatment, and so on.

Steroids

Steroids are a group of medicines that reduce inflammation. Steroids may help you recover faster from some of the symptoms of a relapse.

Rehabilitation

Rehabilitation is the use of therapy to improve or restore functions that have been damaged by MS in order to improve comfort and quality of life. Rehabilitation can be provided by healthcare professionals, such as occupational therapists and psychologists, and it can be tailored to meet your needs, helping you live as full a life as possible.

Residual disability

Following a relapse, your body goes into a remission or 'recovery' phase, when the symptoms that had worsened get better or even disappear again. If they get better but do not fully go away, the impact this has on you is called residual disability.

Research

Adverse event or side effect

An adverse event is an unwanted change in your health (such as a new symptom), which is experienced after you have taken a medicine or non-drug treatment. If this happens, you should tell your doctor immediately, as they will need to work out whether the change is related to your drug, your MS or something else.

Clinical trial

A clinical trial is a research project that investigates the effect of a treatment (e.g. a drug, surgical procedure or diet) or device (e.g. a pacemaker) to understand whether it is safe and effective.

Epidemiology

Epidemiology is the study of the distribution and patterns of disease within a specific population (e.g. a country).

Incidence

Incidence is the number of new people who develop a disease, health problem or a risk factor over a specific period of time (such as a month or year).

McDonald criteria

Diagnosing MS can be difficult, so doctors use guidelines agreed by experts. The McDonald criteria are the most widely used guidelines.

No evidence of disease activity (NEDA - also sometimes abbreviated to NEAD (no evidence of active disease) or NED)

If a person with MS is said to have achieved NEDA, this means that they are not experiencing relapses (exacerbations), show no worsening of disability and have no new or active lesions, suggesting that the disease is actually controlled. This is the ultimate goal of disease-modifying therapies.

Oligoclonal bands

Oligoclonal bands are a diagnostic marker (something biological that is measured to help diagnose a disease) used to look for signs that your immune system is attacking your nerves. Two or more bands showing on a test can be a sign of inflammation in the CNS, such as that seen in MS. Around 80−95% of people with MS show oligoclonal bands in their cerebrospinal fluid.

Pathology

Pathology is the study of the causes and effects of different diseases.

Patient reported outcome measures (PROs)

PROs are a way of measuring the impact of your treatment by directly asking you questions about your condition. These are particularly useful for assessing changes in invisible symptoms – which are sometimes harder to directly measure in a clinical setting – or changes in lifestyle.

Prevalence

Prevalence is the number of people in a population with a disease at a specific point in time. For example, the prevalence of MS worldwide is over 2.8 million cases as of September 2020.

Randomized controlled trial

This is a specific type of clinical trial. Groups of similar people (e.g. age and/or type of MS) are randomly assigned into groups. The 'experimental' group receives the treatment being tested, and the 'control' group receives a different treatment, a placebo, or is left untreated.

Schumacher and Poser criteria

Diagnosing MS can be difficult, so doctors use guidelines agreed by experts. The Schumacher and Poser criteria were introduced in the 1960s and 1980s, respectively, but have now been replaced by the McDonald criteria.