



Research matters

The latest developments, innovations and achievements in MS research

Spring 2020 • Issue 020



The future of symptom management

How technologies like virtual reality could help people with MS

plus

Oligodendrocytes, cognition, early intensive treatment and more

**MS Society**

372 Edgware Road,
London NW2 6ND

Tel 020 8438 0700

Fax 020 8438 0701

researchmatters@
mssociety.org.uk

www.mssociety.org.uk

Editor

Caitlin Astbury

Writers

Caitlin Astbury

Nikos Evangelou

Catherine Godbold

Katie Howe

Chris Leach

Siva Nair

Lorna Paul

Sarah Rees

Beth Shorthouse-Ullah

James Turton

Amy Webster

With thanks to

Colette Beecher

Sarah Bittlestone

Sarah Briggs

David Coutts

Jo Dalton

Robert Dineen

Emma Gray

Pauline Knott

Susan Kohlhaas

Hannah Maunder

Roshan das Nair

Jo Quinn

Jenny Robertson

Richard Scholey

Lyndsey Shellard, and our

Research Network

Designers

Redactive

Welcome to Research matters

At the time of writing, we're all facing the challenges of the coronavirus pandemic. We're updating our website regularly with the latest advice for people with MS. On **page 5** you can find links to our most up-to-date information and read about a new survey from the MS Register that is exploring how COVID-19 affects people with MS. We're also working with MS Society-funded researchers to understand what this will mean for their research and how we can support them through this unsettling time.

In the meantime, we still wanted to bring you the latest news and developments in the world of MS research. On **page 12**, you can read our cover story to find out how virtual reality and exoskeletons could help people with MS. We put your questions to our research team on **page 8**. Hear the latest on cognition research in our city spotlight on Nottingham on **page 14**. And on **page 18** we talk about how exactly we plan to stop MS. As always, we'd love to hear what you think about *Research matters* and if you'd like to be involved. You'll find contact details on the left hand side of this page.

I know that we are all feeling the strain of the uncertainty surrounding coronavirus at the moment. On the opposite page you can find contact details for our MS Helpline - our staff are always here to support you.

Dr Susan Kohlhaas

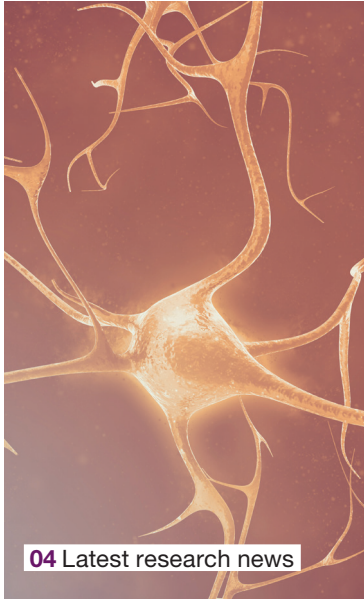
Director of Research



Photo: Jon Bradley

contribute

Our Research Network are a group of people affected by MS who help to shape our research programme. To find out how you can get involved, visit mssociety.org.uk/researchnetwork



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Our Stop MS Appeal



talk

If you'd like to talk to someone in confidence about any of the topics raised in the magazine, our MS Helpline is here for you. Call for free on **0808 800 8000**, or email helpline@mssociety.org.uk

Research matters is available as an audio download. For details, phone **0300 500 8084** or visit mssociety.org.uk/Research-Matters

Predicting how MS develops

Dr Karen Chung and her team from UCL showed that MRI scans taken only one year after diagnosis can be used to predict how MS develops 30 years later. The research followed 120 people who experienced an episode of MS-like symptoms during the 1980s. About two thirds went on to receive a diagnosis of MS.

After 30 years, there were significant differences in how people's MS had developed. People in one group still had a diagnosis of relapsing MS and remained mobile. This group were employed or had retired at the expected age. In the other main group, people had higher levels of disability and had gone on to be diagnosed with secondary progressive MS.

Researchers found that these outcomes could be predicted by looking back at MRI scans taken in the first few years after the initial symptoms. The strongest predictor of secondary progressive MS at 30 years after diagnosis was the location of lesions in the brain.

Currently, when someone receives a diagnosis of MS, there's no routine way of predicting how their condition will develop. This can be incredibly distressing and can make decisions about treatment and the future very difficult. So research to identify the early signs that indicate how someone's MS might progress is really important.

Research roundup

We take a look at some of the latest research discoveries from our fabulous MS Society-funded researchers

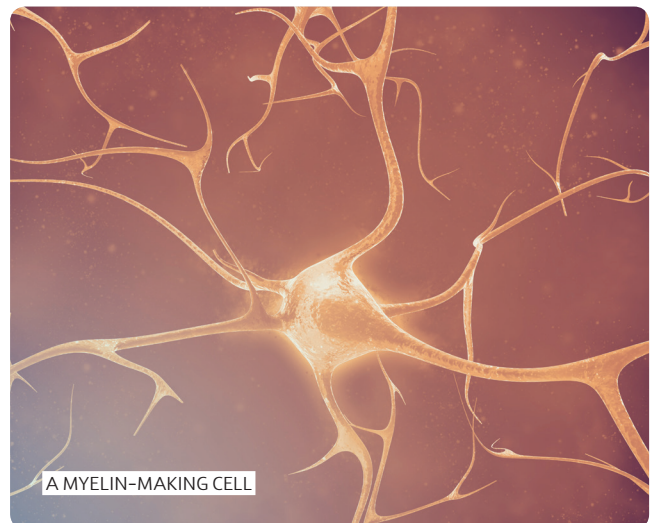
Diabetes drug promotes myelin repair in rats

To stop MS, we need treatments that repair myelin, the protective fatty coating around our nerves. Our brains have the natural ability to regenerate myelin, using special myelin-making cells which are made from another type of cell called oligodendrocyte precursor cells (OPCs). But in MS myelin repair stops working properly.

Professor Robin Franklin and his team from our Cambridge Centre showed this happens because OPCs lose their ability to transform into myelin-making cells. But when rats were given an alternate day fasting diet

(meaning they ate every other day), OPCs recovered their ability to become myelin-making cells. This led to an increase in myelin repair. Most excitingly, the commonly-used diabetes drug metformin was able to mimic these effects without any actual fasting.

While this research is still in its early stages, this discovery could lead us to vital new treatment targets.



A MYELIN-MAKING CELL

MS risk factors in a diverse population

Researchers think MS is triggered by a combination of factors. Your genetics, environment, lifestyle and where you grow up can all affect your risk of MS.

But historically, this research has mainly focussed on people who identify as White. So we don't know whether risk factors differ for people from other ethnic groups. And there may be factors we don't know about yet, because they don't show up if you only include people with the same background.

Researchers from Queen Mary University London have started to address this problem by exploring MS risk factors in people from East London. East London has a very diverse population – UK Census data shows that almost 30% of the population identify as Asian or British Asian, and 17% as Black.

The researchers found that both smoking and glandular fever appeared to have an even stronger influence on MS risk in people who identified as Black than those who identified as White. The study also found no significant difference in the overall likelihood of developing MS between Black and White people aged under 40. This challenges the results of previous studies that suggested MS is most commonly seen in White people.

We need to ensure our research includes people from diverse backgrounds so that we can fully understand the risk factors involved in MS and develop strategies to help prevent it. This study sheds new light on how someone's ethnicity can influence their risk of MS.



read

You can read more about the latest MS research news on our website: mssociety.org.uk/research/latest-research

Coronavirus and MS

The COVID-19 pandemic is an unprecedented situation that is changing every day.

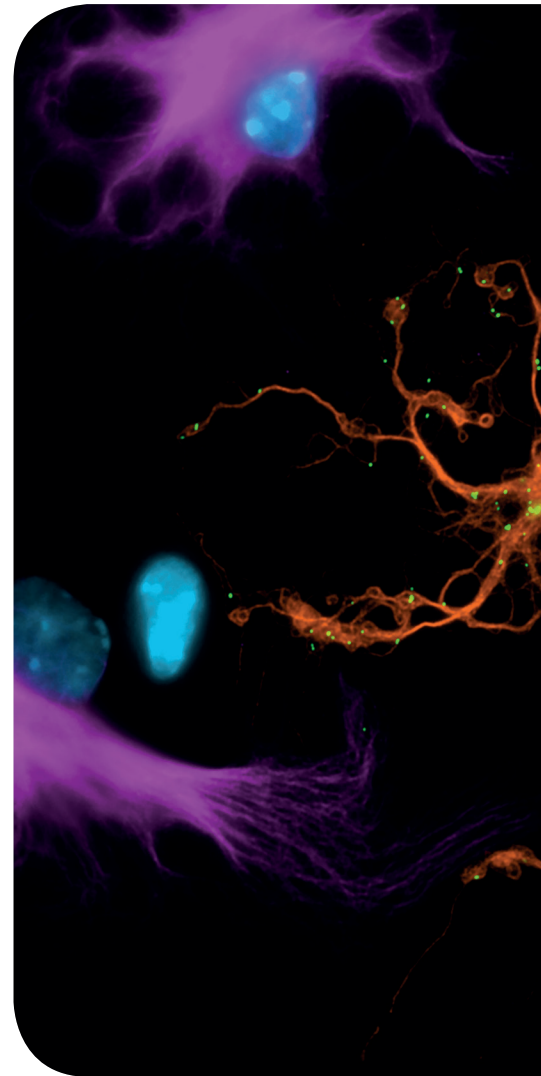
For up-to-date information about MS and COVID-19 visit mssociety.org.uk/covid-19 or call the MS Helpline on **0808 800 8000**.

To make sure we have the best possible understanding of the impact of coronavirus (COVID-19) in relation to MS, we need a clearer picture of how it is affecting people with MS day-to-day. To help address this, last month the UK MS Register launched a new survey asking people with MS about their experiences during the pandemic. Learn more about the survey and results at ukmsregister.org/coronavirus

MS*
REGISTER

The cells at the centre of myelin repair

Oligodendrocytes are popping up in all the latest MS research studies. **Beth Shorthouse-Ullah**, who lives with MS, has been learning the ins and outs of these impressive cells



Since I was diagnosed with MS three years ago, I've been trying to understand as much as possible about what's actually going on inside my body.

I recently received a crash course on oligodendrocytes – a type of cell that's one of the current stars in the world of MS research. My interviewee was **Dr David Coutts**, the MS Society's resident oligodendrocyte expert...

First thing's first, what is an oligodendrocyte?

"Oligodendrocytes come from a family of cells called glial cells. Glial cells support nerve cells and help them to function properly. Oligodendrocytes look after nerve cells by producing myelin – the



BETH SHORTHOUSE-ULLAH

insulating protective coating that surrounds nerve fibres.

Oligodendrocytes look a bit like a bicycle wheel. The main body of the cell is in the centre with lots of 'spokes' that have short lengths of myelin at the ends. Oligodendrocytes can have up to 50 of these spokes, which means they can provide myelin for up to 50 nerve fibres at once."



DR DAVID COUTTS

So oligodendrocytes produce myelin. Why is myelin so important?

"Myelin is a bit like the insulation on an electrical wire. It protects the nerve fibre underneath from damage and makes sure the message travelling through the nerve can get to where it's going as fast as possible.

A nerve cell with a myelin coat can conduct its message 100 times faster than one without any myelin!"

What happens to oligodendrocytes in MS?

"In MS, the body's own immune system thinks the oligodendrocytes are infections and attacks them and their myelin. This means the nerve cells are exposed to

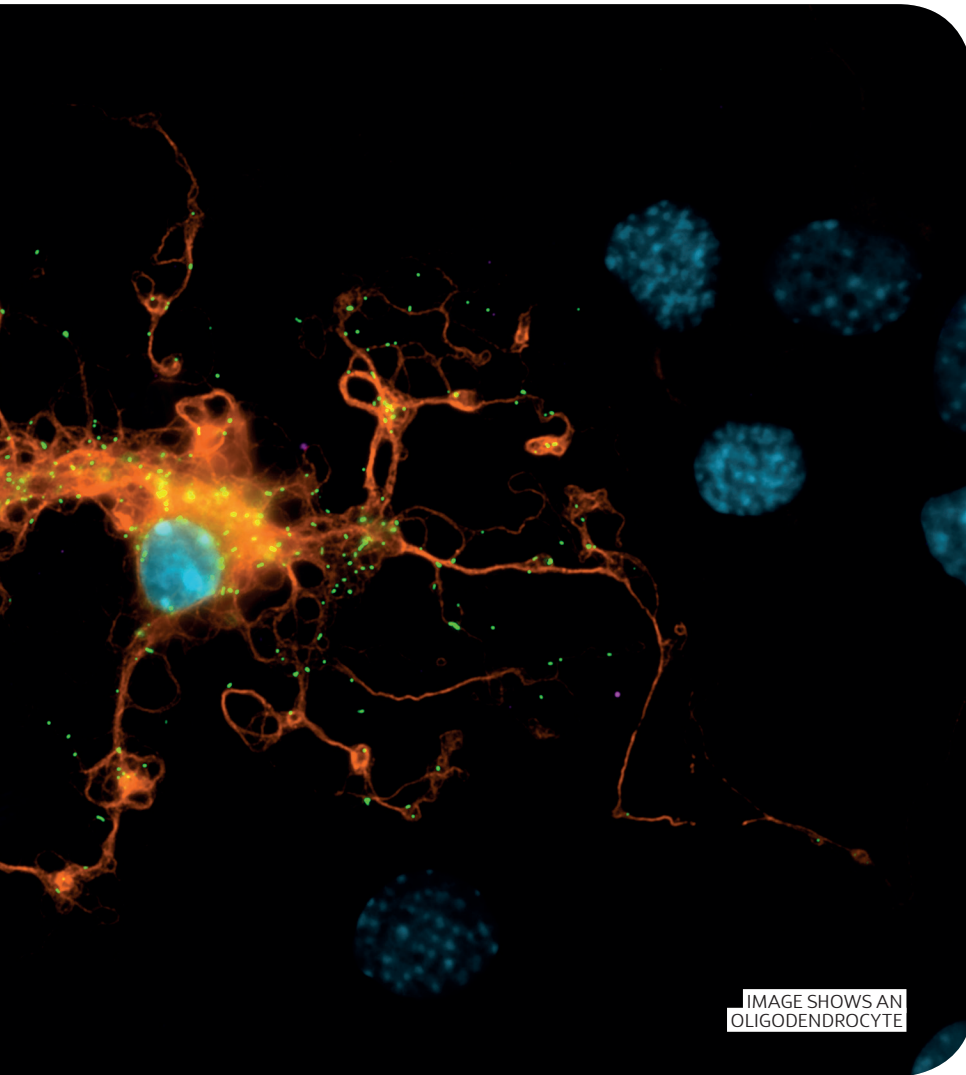


IMAGE SHOWS AN OLIGODENDROCYTE

Photos: Colin Crawford

“Oligodendrocytes look after nerve cells by producing myelin - the insulating protective coating that surrounds nerve fibres”

damage, and the messages can't get through as efficiently, or may not get through at all. This is what causes the symptoms in MS.

If a single oligodendrocyte is attacked, it could mean that up to 50 nerve fibres may lose myelin.”

Can we use oligodendrocytes to find treatments for MS?

“Oligodendrocytes are able to repair and replace myelin when it's been damaged or destroyed. The cells that produce new oligodendrocytes recognise where myelin has been lost and travel to the site of the

damage. They then develop into the new oligodendrocytes that can begin to make replacement myelin.

In MS, this repair process doesn't always work properly. We don't yet know exactly why. It could be that the cells producing the oligodendrocytes have to work too hard to repair all the damage. Or something else – like ageing – prevents new oligodendrocytes from being produced.

So scientists are now focusing on this process to design treatments to help repair lost myelin.”

What does the latest oligodendrocyte research tell us?

“One promising new area of research is looking at whether drugs already licensed for other conditions could be used to promote myelin repair. For example, studies in the lab have shown that a skin cancer drug called bexarotene targets a special part of the oligodendrocyte (a molecule called RXR-gamma) to help them produce myelin more efficiently. A small phase 2 trial has now taken place and we're expecting the results later this year.

Lots of scientists are looking at other aspects of oligodendrocyte research too, like the impact of ageing and lifestyle factors (such as diet and exercise) on myelin repair.

The potential for myelin repair treatments is really exciting, especially for people with progressive MS, for whom there are very few treatments available. I'm really looking forward to seeing what happens next!”

Your questions answered

We answer your questions on sugar, brain shrinkage, and whether stress can affect MS symptoms

Q Can stress and anxiety make my MS symptoms worse?

We know that stress affects about a third of people with MS. And between a third and two thirds of people with MS also have symptoms of anxiety, according to a study by the MS Register – a database that collects information from people with MS around the UK.

MS is unpredictable, so it's no surprise that uncertainty and a feeling of the unknown can turn into stress and anxiety. People with MS often say that stress and other mental health issues impact their condition in some way. And a review of the research found some evidence to suggest that people who had been through stressful events experienced worse MS symptoms.

It's unlikely that these stressful events alone make MS symptoms worse. But they could be one factor among others. And we don't know if stress actually makes

someone's underlying MS worse, or if it just makes the symptoms feel worse and more challenging. We need more research to understand this better.

Q What is brain shrinkage?

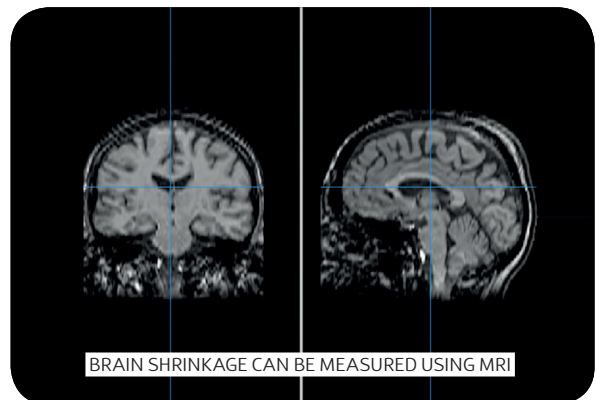
Brain shrinkage (sometimes called brain atrophy) is a reduction in the volume of the brain. This happens when nerve cells and the connections between them are lost.

Brain shrinkage is a natural part of ageing for everyone. But for people with MS, this happens at a faster rate, because more cells are being lost.

Measuring brain shrinkage over time on MRI scans can tell us how someone's MS is progressing. And in clinical trials, researchers often look

at the rate of shrinkage to see whether a treatment is working or not. If a treatment is working, researchers would expect to see a reduced rate of brain shrinkage.

We are supporting some exciting research to help protect nerves from damage and slow down brain shrinkage. A clinical trial called MS-STAT2 is testing if high-dose simvastatin can slow progression in secondary progressive MS. In an earlier trial simvastatin reduced brain shrinkage – so it could be a promising new avenue.



Q Can eating sugary foods make my MS worse?

So far, studies haven't been able to provide conclusive evidence that changes to diet alone can stop MS or make it worse.

Research into areas like diet is really difficult. For example, in drug trials, potential treatments are compared to a dummy drug (called a placebo) and participants don't know which they are taking. But in diet studies, people tend to know what they're eating, so there's more potential for this to influence how they feel.

Some research found that giving sugary water to mice with an MS-like condition resulted in more

inflammation in the brain. But this was a small study, and it's not known if the same is true in people with MS.

MS researchers are also looking into other areas associated with diet. Recent research into low fat diets failed to replicate most of the benefits for people with MS that had been claimed in earlier studies.

Evidence suggests that a healthy lifestyle, including a balanced diet, may play a role in helping to manage MS. Ultimately, diet is a matter of personal choice, but we would encourage people to speak with their MS specialist before making any significant changes to their diet or lifestyle.

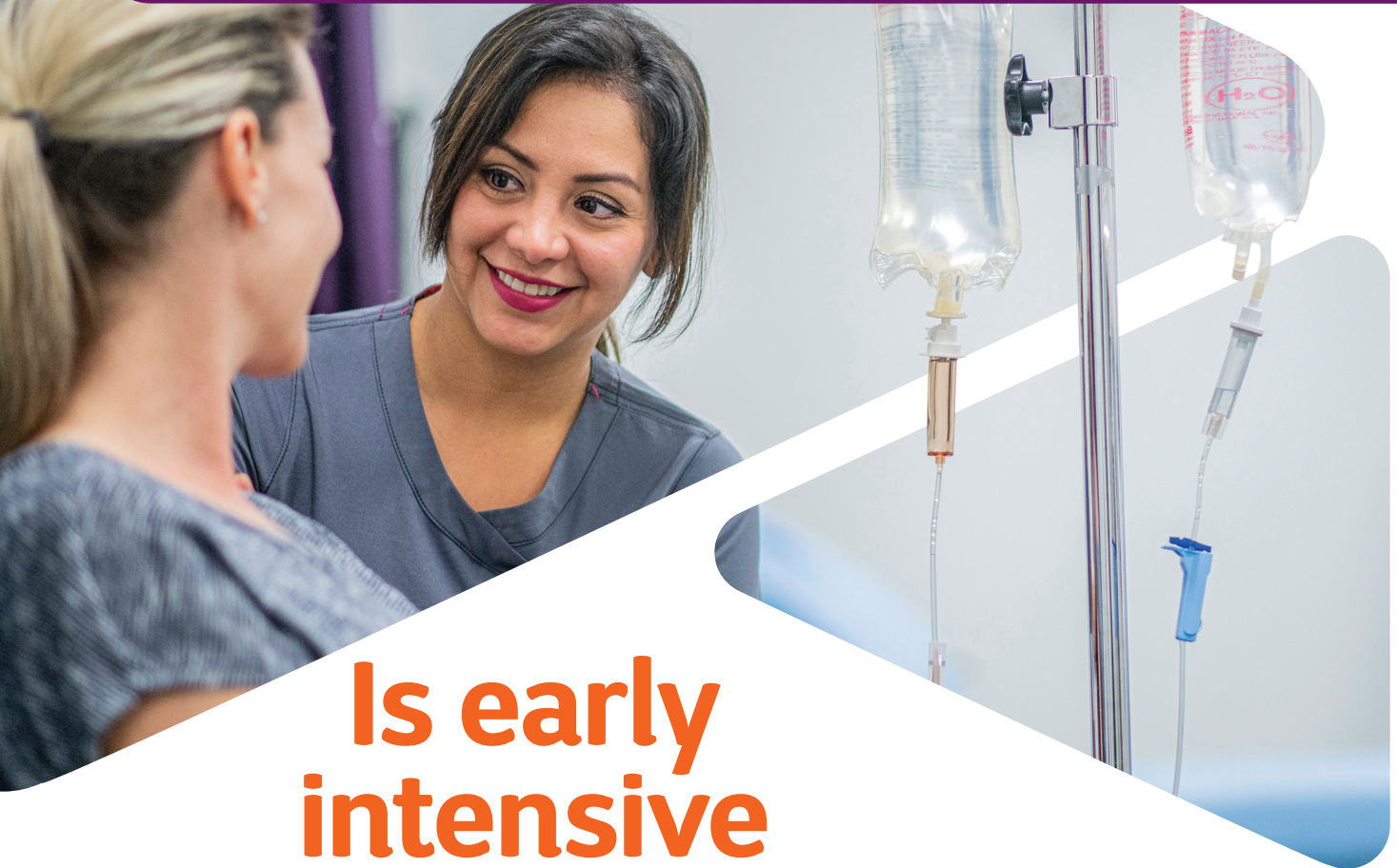
Getting the right advice

Our research staff are not medical professionals. This page is designed to provide general information. If you have specific health questions, please talk to your health care professional.

ask

If you'd like to talk in confidence about any aspect of living with MS, you can call our Helpline free on **0808 800 8000**, or email helpline@mssociety.org.uk

Photo: iStock



Is early intensive treatment best?

Finding out whether early intensive treatment can affect how MS progresses in the long term is one of our top 10 research priorities. MS researcher and neurologist, **Dr Nikos Evangelou**, talks about his new trial aiming to do just that

For many people with MS, long-term disability has the biggest impact on their lives. We now think progression starts early in relapsing MS, long before a diagnosis of secondary progressive MS. Even when you aren't having a relapse, it's possible that some damage is still going on.



DR NIKOS EVANGELOU

So we need to reduce this damage by starting treatment as soon as possible.

Early treatment slows down the build-up of irreversible damage as well as reducing relapses. But there are over a dozen treatments available for relapsing MS, and we don't know if there's a link between the

treatments you start with and how your MS develops in the long-term.

Balancing effectiveness with side effects

All current MS treatments work by changing the behaviour of the immune system, but they differ in how much they do this. More intensive treatments have a stronger influence on immune cells, so they have a better chance of stopping your immune system attacking your myelin. But it can also mean your immune system is less able to fight off the real invaders, like infections, increasing the risk of more severe side-effects.

Some neurologists think we should always give people with MS the most intensive treatment available. But people with MS often tell me that they only want to risk the side effects if the drug will

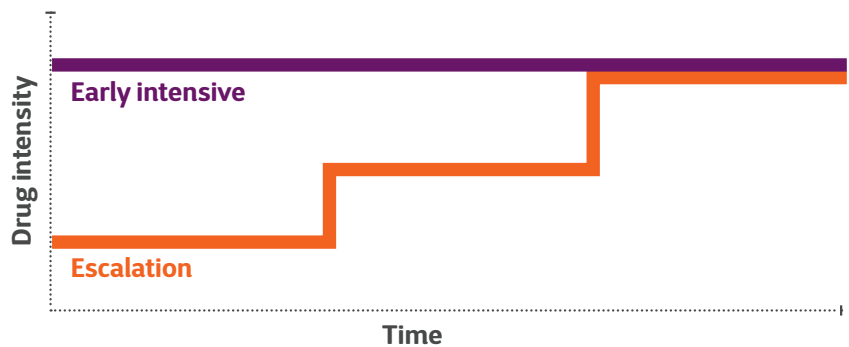
**DELIVER-MS:
Facts and figures**

- The study has two sides, called 'arms'.
- In one arm, participants are randomly assigned to either the escalation or early intensive approach.
- In the other, researchers will simply observe people who have chosen a particular approach and see what happens.
- Researchers will monitor people for three years. Most people won't develop progressive MS in that time, so they will use MRI scans to measure brain shrinkage instead. Everyone's brains get smaller with ageing, as nerve cells stop working. But in MS it can happen faster. The level of brain shrinkage happening in the short term is a good indicator of long-term disability.
- Nikos and his collaborators are aiming to recruit a total of 800 people in the UK and USA who were diagnosed with relapsing MS within the last five years and haven't yet taken any MS treatments.

definitely have a greater effect on progression. I don't think we can be sure until we've compared the two approaches systematically.

So does taking a more intensive treatment from the start reduce your risk of long-term progression more than starting with a milder treatment? If it doesn't make any

The two approaches



Escalation: You start by taking a less intensive treatment, like beta interferon. Interferons have been used to treat MS for a long time. They're very safe and control relapses effectively for many people. You only change to a more intensive treatment if your first one doesn't effectively control your MS.

Early intensive: After you're diagnosed with MS, you're given an intensive treatment, like ocrelizumab (Ocrevus) or natalizumab (Tysabri). These treatments are more likely to effectively control your MS, but come with the risk of more serious side effects.

difference, is there any point in risking more severe side effects?

A new trial – DELIVER-MS

This is the puzzle we are hoping to solve with our new trial, DELIVER-MS. We're comparing progression in two groups of people with relapsing MS. One group will start off with a milder treatment and only move on to a more intensive treatment if the first one doesn't effectively control their MS. The other group will start with a more intensive treatment. I hope finding these answers will mean we can help people with MS make the right treatment decision for them.

The DELIVER-MS trial came out of the MS Society's clinical trials network and a visit to Nottingham by Dr Daniel Ontaneda from

Cleveland in the USA. Daniel was here to discuss a different project, but we quickly realised we were both passionate about the question of early intensive treatment. So we developed the proposal together.

The trial is now recruiting participants at centres across the UK and the USA. Working collaboratively with colleagues from all over the world is one of the most exciting parts of being a researcher. But we can get a bit competitive sometimes – they've recruited about 10 more people than us so far, so we're neck and neck!



To find out more about the DELIVER-MS trial, and how to participate, visit: deliver-ms.com

How technology could transform symptom management

Wearable robots and virtual reality. These may sound futuristic, but our new research projects are harnessing the power of technology to change the way people manage their MS symptoms

Could a wearable robot help you exercise?

Dr Siva Nair from Sheffield Teaching Hospitals is leading a project investigating the use of 'robotic legs' for people with MS.



DR SIVA NAIR

"As well as researching ways to prevent and treat MS, we need to find ways to make living with MS symptoms easier. Constant developments in technology are giving us new avenues to explore. One example is the exoskeleton – a pair of robotic legs that can help you

walk if you have weakness in your own legs.

We all know how important exercise is for our overall health. And if you have MS, the potential benefits, like improved

mood or fewer cognitive symptoms can be huge. But for many people with MS, it can be difficult to do enough physical activity.

In this project, we're exploring how exoskeletons could help people with MS exercise. Our theory is that using an exoskeleton could be more effective and enjoyable than working

My exoskeleton and me

Chris Leach, who lives with MS, tells about his experiences taking part in an exoskeleton trial.

A couple of years ago, I took part in a study looking at using exoskeletons to help with physiotherapy in MS.

I've been using a wheelchair for seven years because of MS symptoms like poor balance and weakness in my legs. I do regular physiotherapy which I find helpful, so I was excited to see how an

exoskeleton could enhance the sessions.

During the six week trial, I used an exoskeleton to do various exercises in weekly physiotherapy sessions. The exoskeleton helped me to stand up for the exercises, but it doesn't do all the work. I had to use my own muscles as well. It was hard work.

Standing with only the exoskeleton assisting me was a fantastic feeling. And walking for the first time in almost three years

was such a thrill – my wife said I had a beaming smile the first time I took a step. Aside from any potential effects on physical symptoms, I felt like it improved my confidence in my own capabilities. Although using exoskeletons every day might be a long way off, I'm excited to see where the work leads.





these upper limbs. But most arm and hand exercises are pretty boring and you have to keep doing them over and over

with a fitness instructor using standard methods.

Although this is just a small early study, my vision is that in the future we could have exoskeletons in the community, just like treadmills at a gym.”

Could virtual reality make physiotherapy more enjoyable?

Professor Lorna Paul from Glasgow Caledonian University is supervising a new PhD project to combine physiotherapy for MS with virtual reality games.



PROF LORNA PAUL

“We know at least half of people with MS experience problems with their arms and hands. This can make everyday tasks like doing up buttons or opening a jar a real challenge. And difficulties using your arms and hands is sometimes linked to people struggling to stay in employment too.

So it’s important we find ways to keep people using

again. It’s a commitment that lots of us would struggle with.

That’s why we’re exploring ways to ‘gamify’ arm and hand physio. We want to use virtual reality to develop games that will make following a rehab programme easier (and more fun!). We’ll be working closely with Dr Matthieu Poyade, from Glasgow School of Art, who will be co-supervising the project.

There are lots of questions we need to answer, so we’ll be working with people with MS to find out what might work. Like – could virtual reality headsets cause motion sickness in

MS? Will different games suit people at different stages of their MS? Do people want to feel like they are immersed in a game, or would they prefer a simulation of real life?

Looking to the world of gaming for answers to some of the challenges in the medical world could make a real difference to people living with MS.”

Inspiration from the world of gaming

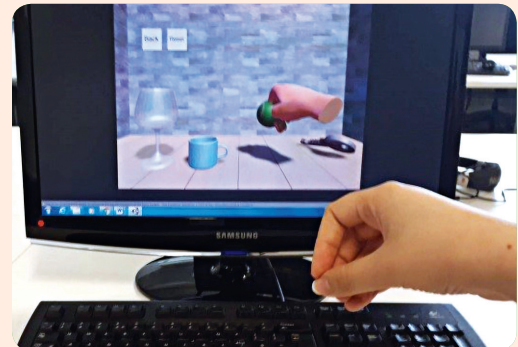
Virtual gaming is already used for rehab in other conditions like stroke. But we don’t yet know how suitable the technology is for people with MS. My Masters project made a start.

I used a piece of technology that allows you to see your hand on a computer monitor and interact with a virtual world. I created games to encourage people with MS to practice using their arms and hands. The games ranged from pinching bubbles and playing a piano, to passing a tennis ball from hand to hand.



AMY WEBSTER

After really positive feedback from the people with MS who took part, I decided to do a PhD to look more deeply at how this approach could offer more benefits for arm and hand difficulties. I’m excited about working with people with MS to design even more effective games.



You can find out more about the exciting research we fund at: mssociety.org.uk/research

Thinking about cognition

Research Network member and Nottingham resident **Dr James Turton** spoke to **Professors Roshan das Nair** and **Robert Dineen**, from the University of Nottingham, about their research into cognition and MS. He gives us the lowdown on their conversation



DR JAMES TURTON



PROF ROSHAN DAS NAIR



PROF ROBERT DINEEN



was diagnosed with relapsing MS over 10 years ago. Although I do worry about my physical abilities, and what MS could mean for me and my family, my biggest worry has always been the potential decline in my cognition. If I can't think and talk as "me", will my children recognise and understand me? Because of this I

was keen to learn about research into cognition and MS.

What is cognition?

Up to 70% of people with MS experience problems with their cognition. These are difficulties with things like memory, attention and problem-solving. To me, cognition is the ability to think in straight lines, to remember names and faces, to make plans for me and my children, and to recall the voices I have used when reading them stories.

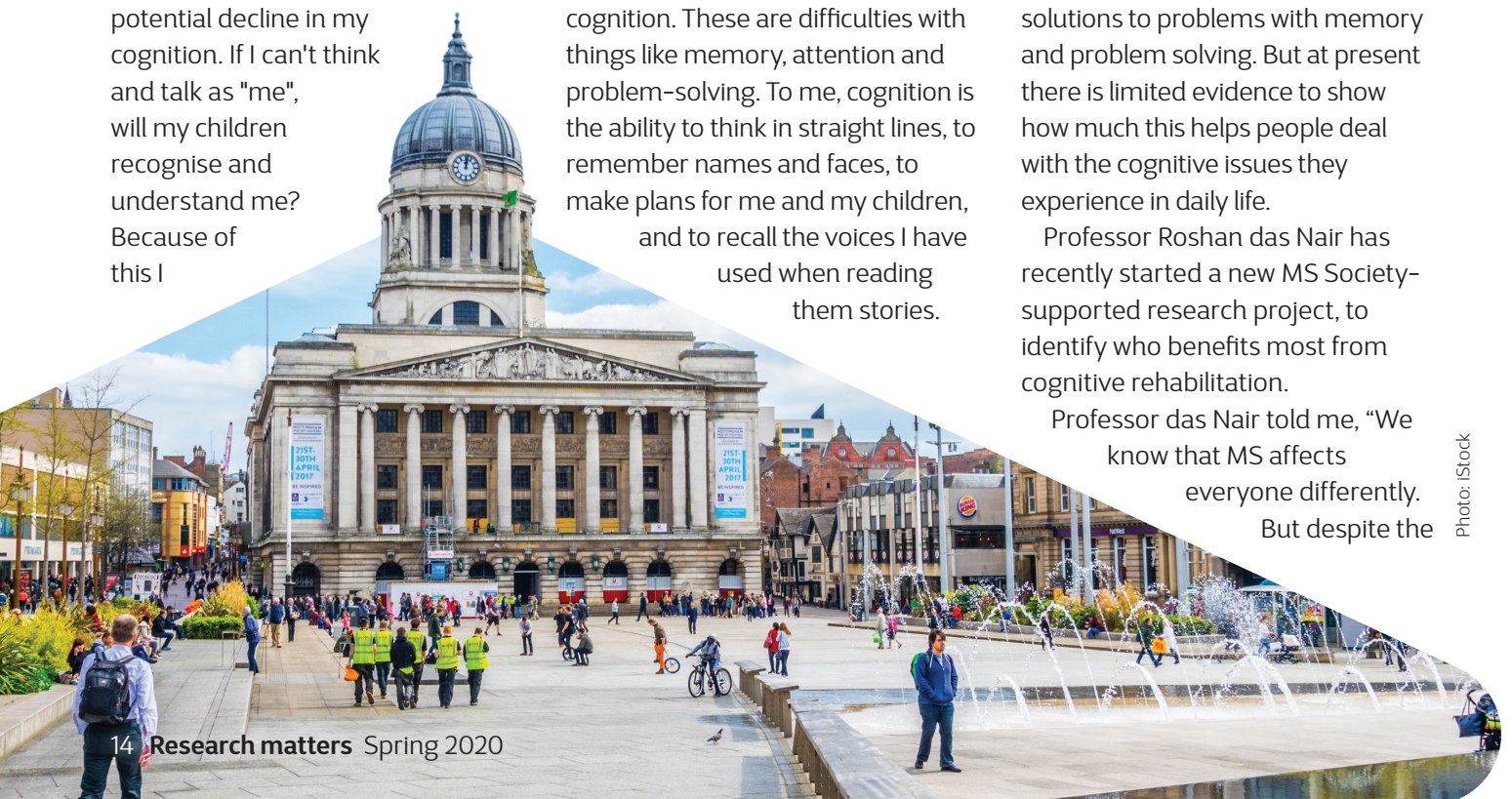
Working out who benefits from cognitive rehabilitation

Cognitive rehabilitation is a therapy that helps retrain people's brains by rehearsing specific cognitive tasks or teaching them ways to find practical solutions to problems with memory and problem solving. But at present there is limited evidence to show how much this helps people deal with the cognitive issues they experience in daily life.

Professor Roshan das Nair has recently started a new MS Society-supported research project, to identify who benefits most from cognitive rehabilitation.

Professor das Nair told me, "We know that MS affects everyone differently. But despite the

Photo: iStock



diversity seen in MS, people tend to receive the same type and amount of cognitive rehabilitation. We know that it can benefit some people, but there is considerable variability in how people respond to it. Does it depend on the type of MS? Or is it age? Or perhaps gender?”

“We are reviewing evidence from previous studies and will then carry out a trial to see if certain groups of people with MS benefit more”, he continued.

If Professor das Nair’s team can provide evidence to help us target cognitive rehabilitation to those most likely to benefit, there may be a better chance of it being provided through the NHS. As a former health service employee I know first-hand that NHS resources are stretched. That’s why this research is really important.

Using magnets to improve cognition

Another avenue of research, led by Professor Robert Dineen, is exploring whether a magnetic device could be a potential treatment for cognitive issues.

“By holding the device close to your head, and rapidly varying the magnetic field, we can activate the part of the brain important for cognition”, he explained. “This technique, called intermittent theta burst stimulation (iTBS), can improve symptoms for people with depression. But we want to see if it works for people with MS too”.

As part of this preliminary study, also supported by the MS Society,



ASANTE NTATA, A PHD STUDENT WORKING WITH PROFESSOR ROBERT DINEEN, DEMONSTRATES WHAT THE iTBS SYSTEM LOOKS LIKE

Professor Dineen is looking to see how feasible an iTBS clinical trial would be, and how often they would need to give the treatment. “People on the trial will have the magnetic therapy every day for between one and four weeks” he said.

For many people with MS, coming to the hospital so regularly could be quite a big ask. So it’s really encouraging that Professor Dineen’s team will be asking participants if they would find that commitment acceptable from the outset.

Spotlight on Nottingham

As a Nottingham resident, I’m delighted that there is so much MS research happening on my doorstep. Both researchers spoke of the collaborative environment at Nottingham that helps drive their research.

“We have brain scientists,

imaging experts and drug trial specialists all working together and generating new ideas to help improve the lives of people with MS,” said Professor Dineen.

“Sometimes people with MS tell us we are being too ambitious in our research plans as we haven’t taken into account what happens in their daily lives. That sort of information is so vital”, said Professor das Nair.

That’s why there is a large network of people in Nottingham who are involved in Patient and Public Involvement (PPI) activities, including myself. We help shape each research study with the researchers and discuss what works for people with MS and what doesn’t. This means researchers can design projects that are relevant for people with MS. And as someone living with MS, I’m looking forward to seeing where this research leads.

How my MS inspired my research

Sarah Rees, one of our Research Network members, catches up with researcher and occupational therapist **Colette Beecher** to find how her experiences with MS treatment inspired her PhD project

While all researchers are passionate about their work, Colette Beecher has a special connection to hers. For her PhD, she is researching the expectations and experiences of people with MS who undergo haematopoietic stem cell transplantation (HSCT) – a



SARAH REES

procedure she underwent herself in 2016.

“I was diagnosed with MS in 2011. I started on a treatment called Avonex, a beta interferon. Although my symptoms didn't progress very quickly, I soon noticed that I was falling into a pattern of two relapses a year. That's when I began to think seriously about HSCT” she explains. “My neurologist confirmed

that I met the strict eligibility criteria. I understood the risks associated with it. So I decided to do it.”

She was incredibly fortunate. “I had hardly any side effects during the treatment. And, although I still experience some of the old symptoms I

had before HSCT, like numbness, I haven't had any new MS symptoms since.”

Supporting people through HSCT

Colette has nothing but praise for the care and treatment she received, but the one aspect of HSCT she felt she hadn't been properly prepared for was the psychological aspect. Online forums and social media showed her she wasn't alone in facing psychological and emotional stress during HSCT, yet there was no structured support for it.

Having identified an issue, Colette decided to help find a solution, recognising that she was in a position to help. She has worked as an occupational therapist (OT) specialising in neurological conditions for over two decades and is a qualified OT lecturer at Sheffield Hallam University with a masters under her belt. A PhD was a logical next step. Professional qualifications aside, Colette is also a woman driven to help. She aspired to be an OT from 14, and says she loves “being able to play a part in improving the quality of life for people and making a difference.”

This research project will certainly do that. She will follow a group of people with MS for a year,



COLETTE BEECHER



Photos: iStock

What is HSCT?

HSCT is an intense chemotherapy treatment for MS. It aims to stop the damage MS causes by wiping out and then re-growing your immune system, using your stem cells.

Research has shown that it is most effective for people with relapsing MS who are continuing to experience relapses, despite taking disease modifying treatments.

interviewing them at specific stages of their HSCT journey to gain an insight into their experience. “If we can better understand the psychological impact of the treatment, we can start to design appropriate ways to support people through it.”

A double-edged sword

Having MS herself – and having undergone HSCT – makes it easy for Colette to relate to her participants. And she has also been working directly with people with MS in her capacity as an OT for years, and so understands a lot of

their needs. But did that help her when she was diagnosed?

“Familiarity with the condition was a double-edged sword in some ways,” she says. “It was good because it sent me to the GP quickly to get myself checked, but bad because I had seen how MS could develop and was therefore very anxious about it.”

“Fortunately, I don’t get fatigue or the ‘cog fog’ that many people experience, so it hasn’t affected my working life too much,” she says. “My weeks are pretty hectic at the moment, trying to manage the PhD while working, but I really love what I do.”

Looking at the long-term

It will take about three years to complete the research, but Colette will be sharing her findings along the way. She is hopeful that her research will be able to help people with MS undergoing HSCT.

“After this research project is done, I’d like to do a follow up, two years after HSCT, to monitor the long-term psycho-social experience of the treatment” she says. “The more we understand about it, the better we can make the care and support for people with MS.”

The time has come to stop MS

Our Stop MS appeal aims to raise £100 million to find treatments for everyone with MS. But how exactly will we stop MS?



Over the last thirty years, research has transformed our understanding of MS. We've learnt how to reduce immune attacks on the protective myelin around nerves, and there are now over a dozen treatments for relapsing MS, and some emerging for progressive MS.

And research successes – many funded by the MS Society – mean that we now have an unprecedented opportunity to develop a programme of effective treatments for everyone with MS.

But to make this a reality, we need a dramatic increase in investment in research. And so last year we launched the public phase of our Stop MS fundraising appeal. But how exactly will research stop MS?

The potential of existing drugs

By tapping into the potential of drugs that are already used for other conditions, we hope to develop new treatments for MS faster. And by 2025, we want to be in the final stages of testing treatments that could slow or stop progression for everyone with MS.

Researchers have found that a cancer drug called bexarotene helps to promote myelin repair in rats. And last year, scientists showed a diabetes drug called metformin can encourage myelin-making cells in rats into behaving more efficiently.

In recent years we've supported several clinical trials for progressive MS

that look at repurposing existing treatments. The MS-SMART trial tested three potential treatments for MS at the same time. And the ongoing MS-STAT2 trial is testing whether a cholesterol lowering drug called simvastatin slows MS progression by protecting nerves. These trials have shown what's possible and helped guide the selection of drugs for future trials.

A new type of trial

In our last issue we introduced our new efficient clinical trials platform, which is being developed by leading clinicians and scientists. This platform will mean we can test multiple drugs at once, and, instead of stopping and starting separate trials, we'll have a rolling programme that adapts with each new discovery. This will save time and money, and ultimately help deliver treatments faster.

A critical point

Research has led to major advances in our understanding of MS. Now we can use that knowledge to find treatments that stop MS once and for all.



Together we can stop MS. Donate at mssociety.org.uk/stop or call 0300 500 8084 and quote the Stop MS appeal. All donations will go towards life-changing research.