the Migraine Trust

at 50
The Migraine Trust is now 50 and I am in my tenth year as Chief Executive. Spending time looking back has been interesting and has surprised me at the scale of some of the changes.

I have worked in the charity sector for the majority of my working life and that sector, too, has changed and evolved in mostly a good way. However it is never easy and we rely on our supporters, be they individuals, corporates or trusts and foundations to enable us to support the eight million people and their families who suffer from the condition.

I have also been fortunate in working with excellent colleagues and always having a Board of Trustees who are willing and able to give time to share their expertise with us. I would like to thank Andrew Jordan and Ian Watmore, past and current Chairs of The Migraine Trust, for their support. One of the biggest changes occurred in 2007 when the Board approved a joint venture with the European Headache Federation (EHF). After 16 Migraine Trust International Symposia, held every two years, we set up the company and charity for the European Headache and Migraine Trust International Congress (EHMTIC). The first meeting was held in London in 2008. Further meetings followed in Nice in 2010, London 2012, and Copenhagen in 2014 and we are looking forward to going to Glasgow in 2016.

I pay tribute to Adam Speller, our Financial Controller and Company Secretary to EHMTIC and to Peter Goadsby and Wendy Thomas, Chief Executive of The Migraine Trust, looks back on her ten years in charge.
Fayyaz Ahmed, my fellow co-directors of EHMTIC, for doing so much hard work to make this venture a continuing success. At EHMTIC 2012 we awarded a Migraine Trust Fellowship to Dr Anna Andreou who is researching into the hypothalamus at Imperial College. We followed this up in 2014 with a second fellowship to Dr Pyari Bose who is based at King’s College Hospital in London. Both of them have contributed articles to this publication detailing The Migraine Trust-funded work they are doing.

We are delighted to be able to fund clinical research again and we intend to continue to do so. Many thanks to our supporters, corporate donors and trusts and foundations who have made this possible. We know how important it is to all of them that we work towards finding a cure for migraine. The All-Party Parliamentary Group on Primary Headache Disorders (APPGPHD) was relaunched in 2007 and had its first reception in the House of Commons in 2008. The Migraine Trust supports the Coordinator’s role, along with other members of Headache UK. The role is currently held by a member of The Migraine Trust’s staff. The Group has been ably chaired by Jim Fitzpatrick MP for the past five years.

The APPGPHD has produced two reports Headache Disorders – not respected, not resourced in 2010 and Headache Services in England in 2014.

The Migraine Trust Advocacy Service was launched in September 2011 to complement our excellent and well used Information and Enquiry Service. The new service was intended for people with migraine and their families and carers to be able to self advocate in different areas of their lives where migraine prevents them from operating fully. The majority of people accessing the new service needed help with employment issues, followed by access to treatment and education related concerns. You can read more about both our Advocacy and our Information services in this publication.

The National Institute for Health and Care Excellence (NICE) set up the first Guideline Development Group on Headache in 2010 and launched the Clinical Guideline 150 in September 2012. Medical Trustee Brendan Davies and I were part of this process.

We have continued our ‘Managing Your Migraine’ meetings for people suffering from migraine. We move around the whole of the United Kingdom with our clinical colleagues from the British Association for the Study of Headache (BASH) providing stimulating talks for patients. I have enjoyed participating on BASH Council and The International Headache Society, where I am able to raise the Trust’s profile and network with leading health professionals and corporate sponsors in the migraine field.

Treatments have changed too in the past ten years. Botox was given mandatory funding in 2012 for chronic migraine and devices have paved the way to help people manage their migraine in a non-invasive way. A new generation of drugs are on the horizon, too.

Let us hope that the next ten years are equally exciting.

“We are delighted to be able to fund clinical research again and we intend to continue to do so. Many thanks to our supporters, corporate donors and trusts and foundations who have made this possible.”
Help The Migraine Trust achieve its goals

Ian Watmore, Chair of Trustees for The Migraine Trust, explains how migraine has affected his life and career and calls for greater support for sufferers

As a migraine sufferer in his fifties, I am a contemporary of the Trust and immensely grateful to it for its work throughout my life to enable me to have a high quality of life today.

I have been fortunate enough to hold top management positions in business, sport and the Civil Service. I was the UK head of Accenture when it was floated on the New York Stock Exchange; I was the head of the English Football Association when it was plunged into crisis by Setanta’s bankruptcy; I have worked in Downing Street for Prime Ministers Blair, Brown and Cameron and I am on the organising committee for the 2015 Rugby World Cup.

These top jobs are rewarding in different ways but they are also physically demanding, mentally challenging and require the skin of a rhinoceros. I was blessed with personal attributes to rise to these challenges, and doubly blessed by a strong and supportive family. But I was also cursed with migraine, a condition that affects millions of Britons, who, like me, suffer largely in silence.

For those readers who think migraine is like a bad headache they get once in a while or the hangover they get after too much booze, think again. Migraine is like someone thrusting a red hot poker through your brain then twisting for good measure and they do it day after day with only occasional respite. Mentally, it is like your own private cloud which follows you around to rain on your parade when everyone else is enjoying the sunshine. Socially, it is a stigma that you are afraid to mention because you might be thought of as weak or a malingerer.

I found by accident that nosebleeds gave me temporary respite from the pain. So I started to self harm if I had pain before an important corporate deal negotiation, preparing to face the media over another England football failure, or a one-to-one meeting with the Prime Minister. Most people would prepare for these meetings by mugging up on facts and figures, and getting their lines prepared. I was more often than not in the toilets ramming a cotton bud up my nose, deliberately giving myself a nosebleed to gain temporary relief. No way to run a country as they say.

I was then referred from my home in Manchester to London to see the top migraine doctor in the world, Professor Peter Goadsby. I was introduced to the magical triptan medication, the only thing that ever gives me relief from an attack. With preventative medicine and a greater insight into the triggers for migraine attack, plus the ever present triptan emergency tablet, I have been able to control things pretty well for the past few years. I now rarely drink alcohol, eat and sleep better, exercise more and generally avoid known triggers. My quality of life is much improved and with it my effectiveness, not to mention my general mood and health.
But I will always remember the dark days when the persistence and acuteness of the pain was, to me, constant. People talk of migraine as a suicide headache and I can understand why. Without relief and preventative care, life with migraine really isn’t worth living. Yet the triptans and other solutions are only a recent discovery, and the level of research into this debilitating condition remains scandalously low.

Professor Goadsby introduced me to The Migraine Trust, a wonderful charity charged with raising awareness of the condition, funding research into its causes and cures and supporting sufferers. We are focusing on the following priorities:

- finding new sources of revenue to fund research
- investing in social media and other communications to help sufferers
- raising awareness of migraine in Parliament and the media generally
- encouraging employers to see tackling migraine as part of the employee well-being agenda
- getting greater training and awareness across the NHS, to help sufferers like me get correct diagnoses, quickly
- giving sufferers, particularly men, the confidence to go public over their condition and help others by so doing.

I am living proof that it is possible to achieve your personal ambitions at whatever level, whilst suffering from this dreadful condition. But I would have benefitted so much from earlier diagnosis, earlier discovery of medication, access to support networks of fellow sufferers and a general acceptance that it is a health condition, not a sign of weakness.

The Migraine Trust is there to help future sufferers but as a small charity we need more direct support and greater access to the bigger research funds and foundations. Please help in any way you can. It probably won’t help England play football any better but it will help millions of citizens improve the quality of their daily lives.

“I would have benefitted so much from earlier diagnosis, earlier discovery of medication, access to support networks of fellow sufferers and a general acceptance that it is a health condition, not a sign of weakness.”
I have suffered from abdominal migraines since I was very young. My migraines consist of a pain in the stomach, headache and exhaustion. Before my migraine actually starts I get rather energetic but then this is followed by an extreme lack of concentration. I now know that when I get an energy boost I must get to bed early, as sleep is the only thing that helps. However if I can’t get to sleep, I put an ice pack on my forehead and have a very large drink of cold water, which relieves the pain allowing me to get to sleep.

I used to suffer at school and at home, resulting in about two or three migraines per month. I have noticed a big dip in the number of migraines I have suffered recently; hopefully I am growing out of them. When I am at a school, it is obvious when my concentration levels are suffering and I know an attack is imminent. As soon as I am aware of this happening, I know I need my bed! That is the only way I can handle it. Sometimes, I have sickness and that brings relief straight away but this is not always the case.

I have been very lucky at school as my friends have been very supportive. They know that if a migraine strikes I need peace and quiet. I think my headaches are related to stress and very busy periods. Sometimes, after a busy week, I have an attack at the weekend. It is a shame because I have to miss out on doing activities as the pain is overwhelming. There is nothing that can be done; I just accept them as they come.

Not everyone understands abdominal migraines. At my primary school, there was an amazing lady who understood that if the symptoms were to occur I must be sent home to bed immediately. She was very sympathetic and caring because she had a son who also suffered. However, most teachers at my school thought migraines were just a headache and didn’t really understand the severity and how much of a disability they could be. They also didn’t understand the sickness and thought I should stay off school for 48 hours when I only really needed a day. They also thought Calpol would help but in my experience, it is useless and doesn’t touch the pain.

If you are a sufferer, my advice to you would be:

• get as much sleep as possible
• keep well hydrated
• if you feel sick, just let it happen as it will relieve the pain, trust me!
• tell your teachers and try to make them understand

I really hope this helps you as I know how it can feel.

I think it can help to read other people’s experiences and top tips!

Good luck.
About **4%** of pre-pubertal boys and girls suffer from migraine. As children get older there is a predominance among girls.
My son Matthew first started with symptoms of headache at about 12. He would wake up with headaches and missed quite a bit of school, which was unusual for him.

At the time I thought ‘migraine’ because I have it myself and so did my mother and her mother but I was told that the symptoms were not typical of adult migraine. Matthew had a CT scan and I kept saying ‘I have had a lot of trouble with migraine’ but the response was ‘no, no, wrong symptoms’. Over the next couple of years it evolved into something much more like migraine.

I think this is more of an issue for children as they don’t present in the same way and so find it more difficult to get diagnosed. A lot present with chronic abdominal pain, which is sometimes ordinary tummy pain and sometimes a migraine symptom and a sign of what’s to come.

We’ve been quite fortunate as I am a doctor myself – a Consultant Neonatologist – and our GP has been very supportive. However, children’s neurology services are often not geared towards migraine and GPs are reluctant to refer. For a teenager, adult neurology services are often not sufficiently responsive to adolescents and so they lose out between the two.

My own experience of adult neurology services is that they are grossly overloaded, so migraine is disadvantaged in a big way by favouring conditions such as epilepsy and Parkinson’s disease which are seen as ‘more important’.

Matthew’s school was supportive. It is a boarding school – Matthew went as a day pupil – and so they had a nurse and a medical room which meant there was someone he could go to who would give him analgesics and provide somewhere he could lie down.

Schools vary a lot in sympathy and facilities and pupils with a headache are often sent to the secretary, where they get a paracetamol and their parents are called. The school has nowhere to put a child and no way of getting them back into lessons and so the usual solution is to get them out the way. However, this is a chronic and recurring condition that might improve relatively quickly thus allowing the child to return to lessons later after a period of rest away from the classroom.

It is difficult for parents who may well be working and are often quite a distance from the school and thus find it hard to take their child home. The absence patterns can be quite erratic, too, which makes it hard for the school to support the child’s education.

I think what happens, or at least what happened with Matthew, was a tendency to try and get on with things. He would wake up with headaches and so often wouldn’t get to
school. When he did make it in, what would happen when you’re a teenager and all your mates are big tough rugby types is that the tendency is to carry on. There’s a lot of not wanting to stand out.

I can understand this from my own experience. Because migraines are not visible, I am much less likely to talk to other people about them and I think there is a kind of stigma. In the past I have hidden my migraine from my employer because I was worried it would result in my being additionally scrutinised and I would be seen as unreliable when I’ve actually missed very little time and usually struggled on. My colleagues are aware of my difficulties but when others ring in sick with migraine there are eyebrows raised.

It is difficult seeing my son with migraine. I guess some things are easier as I do understand how it feels and can appreciate how best to help him when he has an attack.

I don’t feel too guilty about ‘passing it on’ as we can none of us predict that, and we all of us carry bad genes which we might pass on to our children. It’s just the luck of the draw really – it might have been something more disabling.

I do worry about what he misses when he has an attack such as education and social activities and want even more for the acute and prophylactic treatment to be available for children and with less side effects than for me personally. I also worry that he will have more trouble later in life, even though that isn’t particularly likely.

Matthew’s just finished his first year at Bristol University doing Architecture and it seems to have gone reasonably well. One of the big difficulties for teenagers and young people is that the lifestyle needed to minimise migraine triggers such as regular sleep and meals is not ‘cool’ and requires good organisational skills; he has struggled with that like many others of his age.

He has had problems with migraines away from home, and unfortunately can’t take triptans because of side effects, but has been prescribed Propanolol as a preventive which does seem to be helping. His flatmates have a much easier time than him academically so that adds to the stresses but he seems to be coping. I hope that continues and that, if he has children who inherit migraine from him, they have the support they need.

“I do worry about what he misses when he has an attack such as education and social activities and want even more for the acute and prophylactic treatment to be available for children and with fewer side effects than for me personally.”
Stabbing, sledgehammer blows and a fog

A 49-year-old woman, currently under the care of a consultant neurologist, explains graphically the pain and misery caused by migraine.

A man suffering from headache in the form of devils. Coloured etching by G. Cruikshank, 1835, after Captain F. Marryat.
It feels like I have two headaches.

The first is like a steel headband which is far too tight but slips over your eyes making it hard to open your eyes and see. I get bright flashes of light and black zig zag lines across my vision all the time now whereas before they only happened with a migraine. I also see something black which is just out of my vision, in the corner of my eye, and when I turn to look there is nothing there. My eyes also go as if I am watching an old film which flickers all the time or as if I am blinking really fast.

There is a piercing pain behind my left eye and just above my left ear, giving me an earache and lower jaw and tooth ache. The whole left side of my face has numbness to it, as if I am touching someone else’s face. But there is pain in my left cheekbone when I touch it as well as nasal congestion.

I know that this will sound like a fairy story, it does to me and I’m suffering it, but these symptoms can swap sides from left to right numerous times during the day but normally end where they started – on the left side.

I also feel nauseous all the time with dizzy spells, vertigo, loss of balance as if walking on a ship in a storm at sea and get travel sickness, which was never a problem before.

This headache never goes away but gets progressively worse throughout the day until I find it hard to speak or even think of the words. Light and sounds become a real problem and the slightest movement makes me vomit. When I do eventually fall asleep the pain in my head and restless legs keep waking me through the night.

This headache seems to have got worse, more intense and a lot more painful in the past four to five months.

The second headache comes in spikes throughout the day and seems to superimpose itself over the first headache.

“It starts with a banging as if someone is hitting me on the side of my head with a sledge hammer and it nearly knocks me off my feet.”

It starts with a banging as if someone is hitting me on the side of my head with a sledge hammer and it nearly knocks me off my feet.

I then get a stabbing sensation behind one eye. I sometimes have to force my eyelid open with my hand. It feels like my eye is resting on my cheek and it droops down on the outer corner. It doesn’t happen all the time but I completely lose my eyesight.

Vomiting always comes next. The pain seems to spread across one half of my head and into my neck and shoulders. It goes down one arm and I get pins and needles and hot aches in my fingers.

I don’t understand when people talk to me; it sounds like scribble language.

I get confused, aggravated, irritable, frustrated, clumsy, slow and stupid. I walk into door frames and other objects. Through lack of concentration I do stupid things. To name but a few – pour boiling water over my hand, take hot trays out of the oven without using oven gloves, cut myself while cutting vegetables, slice through electric cables, lock myself out of the house. Drop everything. Break everything.

One of the things I find most difficult is how slow my brain works now and that I can’t think of the right words to express myself properly or even hold a proper conversation as the words elude me. Fighting the fog is like fighting a losing battle.
Migraine: treatment history 1965-2015

By Dr Mark W Weatherall
The Migraine Trust was founded in 1965. Its mission was to improve the lives of people with migraine through research and education. This has not changed in 50 years but, while today’s sufferers have a variety of options for acute and preventative treatment of their migraine, things were very different in the 1960s.

As long as people have had migraine, there have been treatments. Fashions change, and so do treatments, but some stand the test of time and become established parts of standard therapy. Ergots, for example, were shown to be helpful for migraine in the late 19th century, and became standard treatments following the experiments of Dr. Harold Wolff in the 1940s. By the 1960s various formulations were available to give ergotamine orally, by injection, or as a suppository, often in combination with caffeine (and, in the case of Migril, cyclizine). Aspirin, often given as powders rather than a tablet, became a standard treatment for all sorts of pain, including headache, between the wars. Paracetamol was available in a number of proprietary brands, but non-steroidal anti-inflammatory drugs such as ibuprofen (first trialled in arthritis in 1967) remained prescription-only drugs until the mid-1980s. Opiates and barbiturates were widely used for severe or refractory headaches.

When it came to prevention, however, one could, as an advertisement at the time said, count on one finger the number of drugs shown to be effective in preventing migraine: that drug was methysergide. The introduction of methysergide in the mid 1960s revolutionised the treatment of migraine. The first ever randomised controlled trial of a migraine preventive was done with methysergide (though some of the patients had what we would now recognise as cluster headache, for which methysergide was also effective) and published in the Lancet in 1964. Looking back at this era in 2008, the American headache expert Neil Raskin recalled: “I think back to all those patients that I had sent to psychiatric consultants who came back to me with ‘no psychopathology;’... Suddenly, patients could take a few tablets of methysergide and within a week they were headache-free. No change in their internal milieu. Cured… [This drug’s ability to antagonize certain actions of serotonin peripherally abruptly transformed migraine from a psychosocial problem into a scientific one.”

Quickly, however, it became apparent that the use of high doses of methysergide for extended periods was associated with the risk of the development of severe side-effects, including cardiac and pulmonary fibrosis. Regimes were devised to reduce the risk of these feared complications, but there was also much interest in finding alternative preventative treatments that were safer. The first reports of the use of propranolol as a preventative treatment for migraine appeared in the late 1960s (was a chance observation in patients being given beta-blockers for angina), and the first reports of the use of amitriptyline appeared shortly afterwards.

There was much interest in the late 1950s and early 1960s in the role of serotonin in migraine pathophysiology. Methysergide was believed to reduce migraine because of its properties as a serotonin antagonist. Other antagonists were available; in 1963, for example, before the methysergide trial was published, cyproheptadine was reported to be helpful for migraine. The pharmaceutical company Sandoz created an antaminic (anti-amine) agent originally called BC-105, whose properties as a serotonin antagonist made it an attractive candidate to be a migraine preventative. As Sanomigran (pizotifen) it was shown to be effective in a series of trials published between 1967 and 1971, and quickly became a standard part of the therapeutic regime, though its tendency to cause hunger and drowsiness have always limited its general usefulness.

In 1969 Marcia Wilkinson published the first report of the use of clonidine (Dixarit) as a migraine preventive. The same year saw the first report of the effect of amitriptyline for migraine. Several different beta-blockers were trialled in the 1970s and early 1980s, it eventually becoming clear that all beta-blockers without partial agonist qualities could be helpful in reducing
migraine. Flunarizine, a calcium channel blocking blood pressure drug introduced in the late 1970s (and known even at that stage to be useful in reducing vertigo) was trialled as migraine prevention, the first studies appearing between 1981 and 1984. Following on from this similar reports appeared for verapamil.

As the potential options for preventive treatment expanded rapidly in the 1970s and early 1980s, acute therapy changed little. Work done by Glyn Volans and others in the 1970s showed that adding anti-emetics such as metoclopramide to simple analgesics such as aspirin or paracetamol improved their absorption and effectiveness. Non-steroidal anti-inflammatory drugs became more widely used, the first trial of naproxen being published in 1980, and of ibuprofen in 1989. However, it was the invention of the triptans in the 1980s, initially by Patrick Humphry and his team at Glaxo, which revolutionized acute therapy in the same way that methysergide had done for prevention in the 1960s. First licensed in Holland in June 1991, injectable sumatriptan rapidly became available around the world over the next two years. The tablet form followed almost immediately, with the nasal spray first licensed in 1996. By this time several other companies were developing triptans of their own, and between 1996 and 2002 zolmitriptan, rizatriptan, naratriptan, eletriptan, almotriptan and finally, frovatriptan, all emerged onto the market.

Research into the mode and site of action of the triptans, pioneered by Peter Goadsby and Lars Edvinsson in the early 1990s, clearly implicated calcitonin gene-related peptide (CGRP) as the lynchpin molecule in migraine pathophysiology. Around the turn of the century research interests shifted to trying to develop CGRP antagonists which, it was hoped, would be as or more effective than the triptans, and safer to use in people, such as those with heart disease or high blood pressure, for whom triptans are not an option. These studies culminated in the demonstration in 2008 that alcegepant, an oral CGRP antagonist, was as effective as zolmitriptan. Unfortunately, soon afterwards, concerns were raised about the potential adverse effects of these drugs on liver function, and to date none of the CGRP antagonists have been licensed for general use.

The vacuum left by the unexpected failure of the CGRP antagonists has been filled to some extent by a series of devices embodying a totally different approach to the treatment of migraine: non-invasive neurostimulation. Surgical treatments for migraine have a long history, with various operations being proposed between the 1940s and 1960s involving ligation of extracranial blood vessels or surgical destruction of cranial portions of the sympathetic nervous system, none of which proved particularly effective. As neural theories of migraine regained the ascendancy in the 1980s and 1990s, attention switched in the early 2000s to procedures such as greater occipital nerve blockade, and ultimately to occipital nerve stimulation, the first report of
which as a potential therapy for migraine was published in 2004. Transcranial magnetic stimulation, which had been used as a research technique to study cortical excitability in migraine patients in the late 1990s, was studied as a potential treatment, and a positive randomised controlled trial appeared in 2010. Most recently non-invasive vagal nerve stimulation has shown some promise as both an acute and preventive therapy.

Returning to prevention, there was early interest in the possible effect of anticonvulsants such as carbamazepine as early as the late 1960s, but it was not until the late 1980s that the first reports of the effectiveness of sodium valproate (which had been introduced as a drug for epilepsy in the mid-1970s) as a migraine preventive appeared, with the first trial being published in 1992. The first trial of topiramate was published in 2001, with the major landmark studies in the USA and Europe appearing three years later. Valproate and topiramate remain the only fully validated anticonvulsant medications for migraine, though small trials of other epilepsy drugs such as levetiracetam, retigabine and pregabalin show some promise. Researchers in Norway have demonstrated that medications from at least two other classes of blood pressure treatment may be helpful for migraine: lisinopril in 2001, and candesartan in 2003, a more recent trial in 2013 demonstrating that the latter is as effective as beta-blockers.

One of the extraordinary things about the history of migraine treatment is the fact that so many of the drugs that we use for prevention have been borrowed from other parts of medicine. Virtually none of the effective migraine preventives started off their lives as medications for migraine. This is especially true for the most recently introduced treatment for chronic migraine: Botox. Reports of reduction in headache frequency in people given Botox for cosmetic or other medical purposes date back to the mid-1990s. The early clinical trials of Botox for migraine were negative, however, and it was not until studies were done in chronic migraine that reliably positive results were seen. The publication of the PREEMPT data in 2008 led to Botox being licensed for the treatment of chronic migraine, and ultimately approved for use in the NHS by the National Institute for Health and Care Excellence (NICE) in 2012.

Fifty years after the founding of The Migraine Trust, the treatment options available to people suffering from migraine have expanded immensely. Some therapies have fallen by the wayside, either because they have been shown to be basically ineffective (cyproheptadine, clonidine, and verapamil, for example, though the last of these has found a role as a preventive treatment for cluster headache), or because (as in the case of methysergide, or the cortical spreading depression blocker, tonerbasat) pharmaceutical companies have deemed them financially unviable. Improvements have come from careful observation, painstaking science and chance (which, as Louis Pasteur famously commented, favours the ‘prepared mind’). Nonetheless there are still significant unmet needs in migraine treatment. Anyone who doubts that the next fifty years will bring changes as extensive and important as the last fifty, should move straight on to Professor Peter Goadsby’s contribution to this volume, which sketches the path down which the science and the art of migraine might take us over the next five decades.

“One of the extraordinary things about the history of migraine treatment is the fact that so many of the drugs that we use for prevention have been borrowed from other parts of medicine.”
Migraine – what you need to know

It is one of the commonest medical conditions yet most people know little about it.
Affects 1 in 7 people

More prevalent than asthma, diabetes and epilepsy combined

Depression three times as common in migraineurs

Affects three times as many women as men
Looking ahead to the cure

Professor Peter Goadsby, Professor of Neurology, King’s College London; Director, NIHR-Wellcome Trust Clinical Research Facility, King’s College Hospital London, and Trustee of The Migraine Trust turns time traveller to write from the perspective of someone living in 2065 who is looking back at the developments of the previous 50 years.

Migraine was common and costly

In 2015 migraine affected perhaps one billion people, was the most common cause of neurological disability in the world, ruined patients’ enjoyment of life and cost countries (including the UK) economic activity to the tune of billions of pounds. The Migraine Trust was 50 years old and the world’s foremost migraine charity. As a patient-focused organisation it had forged crucial links with UK and European headache specialists, and other patient groups, to lobby government, the EU and international associations.

Migraine is an inherited, biologically-based problem

A crucial area of research in the 21st century has been the inherited basis of migraine. Work began on identifying genes responsible for the disorder and the cause of the problem. First, genes for the rarer problem of familial hemiplegic migraine were identified by the Leiden Group, and this offered our first real chance to study aspects of migraine while knowing the precise biology driving the problem. Large-scale studies called Genome Wide Association Studies – GWAS – evolved with technology to identify genes associated with treatment response, with side effects and, ultimately, with the cause of the problem.

As we understood the gene effects and how they predicted migraine attack behaviour we began to predict who would respond to triptans. These drugs were first synthesised in the 1980s and were in widespread use in the early 21st century. They were effective in the sense that about one-third of patients were rendered pain free in about two hours when treating an acute attack.

The Copenhagen Group had first reported in 2014 at a joint Migraine Trust and European Headache Federation Congress that certain gene patterns predicted a better response to sumatriptan. This lead to pursuit of the marker for this response and eventually to a simple test for who would respond which meant no more ‘take it and see’ as personalised medicine grew from this development. The same techniques were soon being used to identify who would have side effects enabling them to be predicted and avoided.

Large-scale collaborations began in Europe through the Horizon 2020 programme and in the US through the American Migraine Foundation to identify genes for common forms of migraine. By identifying these genes we can now test for the condition and manage it properly. We can recognise the childhood syndromes, such as recurrent vertigo or abdominal pain, and not subject these children and their parents to the myriad concerns and tests they endured in the early part of the 21st century. Most importantly, we now have the cure.
Migraine affects the brain in an understandable way

Brain imaging offered an unrivalled insight into what migraine does to patients. The work commenced most notably with pioneering observations from the Essen Group of brain areas active in migraine. We understood the importance of brain mechanisms in migraine quickly through the work of London Headache Group, funded, assisted and encouraged by the Trust and its supporters.

First, we saw the broad areas of the brain involved using techniques that could not be easily repeated because of the radioactivity involved. As we developed MRI-based options we could repeat the measures. We worked out how the brain was affected through the entire attack from the premonitory phase, through the pain and into the postdrome. We learnt how medicines altered these phases, how they brought these phases together and, ultimately, what areas were crucial to change. We understood how medicines stopped attacks, how they prevented them and how they produced side effects.

Now, in 2065, we select the right medicine for the individual patient. We owe much to these imaging techniques that put migraine on the map in medical terms and then drew a road map of understanding that helps its management and now control.

Migraine can be treated

We had learnt in the early part of the 21st century that specific migraine treatments could be developed. First came triptans – medicines acting like a chemical called serotonin which revolutionised the treatment of attacks in some patients. By about 2018 we had the first migraine-specific preventive treatments with calcitonin gene-related peptide (CGRP) monoclonal antibodies. They acted quickly, were effective in many patients and extremely well tolerated. By the mid-2020s we had the next wave – small protein-based therapies such as peptide and now (in 2065) we have seven of these treatments that cover the needs of most patients with all forms of migraine. For those not wanting a medicine, we have non-invasive and minimally invasive stimulation techniques, pioneered in the 2010s by transcranial magnetic stimulation and followed by deeper tissue non-invasive methods.

Migraine has been cured

While it has been wonderful to see understanding and treatments develop over the 21st century, one has now a tinge, almost, of regret as The Migraine Trust prepares to wind down. The development of genomic imaging and penta-digital proteomic science now offers us a simple approach to a cure. It has been a remarkable century; as we stood 50 years ago it looked difficult. However, when a patient-powered charity such as The Migraine Trust gets enough support even a wild dream can be achieved. As was once said, Live Long and Prosper, Migraine Free.

“Now, in 2065, we select the right medicine for the individual patient. We owe much to these imaging techniques that put migraine on the map in medical terms and then drew a road map of understanding that helps its management and now control.”
From Florence to London and now Glasgow
Gatherings of scientists have always been essential for academic progress; the American Society for the Study of Headache was founded in 1959. From its inception in 1965 The Migraine Trust in Britain saw the need for locally based research meetings, and the first of a continuous series of biennial London Symposia was held in 1966. They became ‘International Symposia’ in 1976; and for many years were the only European specialist forum at which research findings could be presented and discussed. The late Dr Frank Clifford Rose regularly edited the published proceedings in book form. The late Federico Sicuteri arranged a meeting in his home city of Florence in March 1980, where the need for an International Society and for larger meetings was agreed among the delegates, and the International Headache Society was founded the following year. Its first meeting was held in Munich in 1983, and the pattern of biennial meetings in the alternate years has continued ever since. In 1991 the European Headache Federation was established, with meetings of its own in continental Europe in the same year as the London meetings, starting in Bremen in June 1992. London held a monopoly of Migraine Trust meetings until 2006 when it was decided to merge them with the EHF, and have joint Migraine Trust and European Headache Federation congresses (EHMTIC) still alternating with the IHS meetings. The first of these was held in London in 2008, the second in Nice in 2010, and after a return to London in 2012 the 2014 meeting was held in Copenhagen.

Those who have attended meetings with more than 1000 delegates and conspicuous commercial support from drug and recently device companies may be surprised to learn that the first meetings were held in the National Hospital, Queen Square, attracting an attendance of less than 100; in 1980 the meeting was held in the Russell Hotel, and in 1982 and 1984 at Charing Cross Hospital. Attendance numbers have increased inexorably; after two meetings in west London hotels the 1990 meeting (which was heavily supported by Glaxo and attracted nearly 1000 delegates) was held in the Kensington Town Hall, where they remained until 2006, except for a special Millennium meeting in the Queen Elizabeth Conference Centre in Westminster in 2000. The 2008 meeting was held in the Hammersmith Novotel and the 2012 meeting in the Marble Arch Metropole Hotel, which is believed to be the largest venue in London.

The early meetings were more informal, and consisted exclusively of platform presentations – the poster only arrived in 1984! After Lord Brain’s untimely death Macdonald Critchley from Queen Square became ‘Founder President’, and chaired the first meetings, making his last appearance only in 1996. The inaugural meeting was addressed by the Secretary of State for Health (Kenneth Robinson) in person. Major presiding figures also included Raymond Greene, endocrinologist at the Royal Free Hospital (and brother of both Graham the novelist and Hugh Carleton of the BBC), and Archie Cochrane, who has posthumously given his name to the international reanalysis of clinical trials. Early topics included a masterly historical review by Macdonald Critchley, the earliest studies of cerebral blood flow by Dr Michael O’Brien, Dr Edda Hanington’s studies with tyramine, and attempts by the Sandoz company to modify the ergotamine molecule to make it less toxic.

Despite fluctuations in commercial support, until now each of these meetings seems to have been larger and better than the last; we all expect this to continue!
Researching what triggers a migraine attack

Dr Anna Andreou BSc, MSc, PhD on her work as a Migraine Trust Research Fellow 2012-2015 at Imperial College London
Being awarded a Migraine Trust Fellowship I was in the privileged position to set up a headache research laboratory within Imperial College London, one of the most prestigious Universities in the UK. We are currently a group of five passionate scientists who, along with our students, aim to shed light on the brain mechanisms that trigger a migraine attack. Understanding the process of events that are responsible for initiating a migraine attack in the brain will simply allow us to stop the attacks from occurring in the first instance.

Although brain imaging techniques can provide an estimated exploration of the brain areas involved in the early onset stage of migraine attacks, technology to date does not allow us to dissect out the exact brain areas involved or the underlying pathological mechanisms that take place. In my research I aim to clarify these neurochemical processes, identify how they influence head pain perception and, most importantly, how we can stop them. More than two years into the Migraine Trust Fellowship, important progress has been made. I have so far identified two regions of the brain area called hypothalamus, that can significantly influence those neuronal processes that make a decision as to whether one feels head pain or not. Importantly, I have now started to understand the neurochemical composition of these regions, and how they influence each other.

Unless we understand the molecular basis of the migraine triggering processes, we will not be able to identify the right targets for an ultimate migraine treatment. The novelty of my research is that it aims to identify the neuronal processes and molecules we need to block in the brain in order to prevent a migraine attack from occurring in the first instance, rather than just offering pain relief upon the onset of a full blown migraine attack. Of great importance is also to investigate in which way a malfunction in these hypothalamic regions and molecular mechanisms may induce the other neurological symptoms that occur during migraine attacks, such as aura and sensitivity to light and sounds. For this purpose, I plan to investigate next the neural networks the hypothalamic brain areas have with those brain areas involved in the development of the accompanying neurological dysfunctions.

Beyond the important research I was able to initiate in Imperial College, through the Migraine Trust’s fellowship support I have made an important contribution towards improving the teaching of headache disorders in medical academic institutions, which for UK institutions has been minimal, and to increase awareness on the impact of migraine in the health system and society. This has been achieved with the introduction of lecturing hours in the undergraduate medical school on migraine and other headache disorders, workshops in the nursing and pharmacy school, and public awareness events.

With your support both The Migraine Trust and my team are committed to making a real difference for all those sufferers with this devastating disorder. I expect that my studies not only will benefit patients by increasing our understanding of the disease mechanisms, but will also lead to an almost untapped opportunity to pursue new migraine specific therapeutic developments that will benefit migraine patients in the long term.

“More than two years into the Migraine Trust Fellowship, important progress has been made.”
My colleague, Dr. Nazia Karsan, and I are involved in migraine research using cutting edge brain imaging technology under the supervision of Professor Peter Goadsby. Using a special type of brain scan (called arterial spin labelled MRI scan), we plan to look at which brain areas are involved early in a migraine attack before the pain starts, during the headache, and after the headache has ceased and to observe where painkillers work. The study is funded by a generous grant from The Migraine Trust.

We plan to recruit patient volunteers via The Migraine Trust website, through GPs and also our specialist headache clinics at King’s College Hospital and Guy’s Hospital.

The principle behind the research is that migraine attacks start some time before the headache is experienced and persist after the headache has finished. We are trying to understand which areas of the brain are activated during the symptoms that people may experience before the start of a migraine headache, such as needing to pass water more frequently, yawning and feeling thirsty (called the premonitory symptoms), as well as during the headache pain itself, and the symptoms after the pain has settled (called postdrome symptoms) like fatigue, inability to pay attention, reduced memory and increased sleepiness, using a special brain scanning method. We are also interested in seeing whether we can observe changes in brain activity in response to migraine relief following administration of aspirin, which is an approved treatment for migraine.

The study and all of the visits involving volunteers will take place at the Clinical Research Facility at King’s College Hospital, Denmark Hill in London. Other researchers may also be involved, all of whom will be under Professor Goadsby’s supervision at King’s College London. During the first visit, subjects will be given a drug called nitroglycerin (NTG) to see if it can trigger a migraine headache and then treated with either aspirin or sumatriptan injection if the migraine headache becomes severe.

The study is divided into two sub study arms. If a subject develops predominant premonitory symptoms before the headache, they will be allocated to the premonitory study arm whereas if they develop predominant postdromal symptoms after the headache has been treated with sumatriptan, they will be allocated to the postdrome study arm. At each of the study visits, subjects will undergo a triggering and treatment sequence, MRI brain scanning, clinical and questionnaire assessments.
This study will be a randomised study, which means that the order in which subjects receive the ‘treatment’ (in the case of premonitory study arm) or the order of each visit (in the case of postdrome study arm) is random. A computer generated code will be used to decide the order.

We hope that this study will help us understand the mechanisms behind the various stages of a migraine attack and help guide future work looking at drugs that may work early in the attack, before the onset of pain, to prevent pain occurring. We also hope to be able to develop new techniques for understanding the body’s response to pain and other symptoms.

“The principle behind the research is that migraine attacks start some time before the headache is experienced and persist after the headache has finished.”
The Information and Enquiry Service is used by people from around the world and, even though they can now surf the net in pursuit of health information, they still wish to put queries to The Migraine Trust, which shows how respected we are and that people associate us with research and evidence-based information.

It is important that enquirers are clear that we are not health professionals at The Migraine Trust and so are not able to provide medical advice or diagnosis; we are mindful that this can only be provided by a person’s own health professionals who take responsibility for their health care. However, health information can help enquirers to feel that they are a partner in their treatment with their health professionals. Examples of questions may be about medication, including how soon it may relieve symptoms and how it works. Other queries may relate to likelihood of side effects of treatment or quality of life issues.

Enquirers can be very worried about migraine, either for themselves or on behalf of a child or other family member. It is important to be understanding about people’s worries and needs.

Those who use our service often want information on how they could manage their condition but are also interested in what research has shown about migraine, such as the cause, and also have worries about, for example, whether migraine causes any damage to the brain.

Enquirers often have high expectations of the service and may be hopeful that research has discovered more than it actually has at present, for example, about the genetics of migraine.

It is important to use authoritative, evidence-based information sources to ensure that the service is safe and accurate. The Migraine Trust’s medical Trustees have been very helpful when information has been difficult to find.

It is understandable that people with migraine can be feeling desperate when they make contact. They might be following up a story in the media about a promising new treatment or a frightening story about health conditions which are co-morbid with migraine for example.

The most difficult queries can be those where there is apparently no published information. Good practice criteria include using more than one good quality information source if possible, and to quote the source. If the same information cannot be found in more than one good quality source then it is unlikely to be evidence based.
The Migraine Trust would like to thank those supporters and partners who have sent us messages of congratulation.
The Migraine Trust is always looking for new partners.
Contact fundraising@migrainetrust.org to find out how your organisation can become involved with us.

INTRODUCING A REVOLUTION FOR MIGRAINE TREATMENT

THE MIGRAINE TRUST - FIFTY GLORIOUS YEARS

Cefaly is proud to be your partner and help celebrate this great event.

Many congratulations to The Migraine Trust for 50 years of magnificent work, not only supporting the many thousands of the UK’s migraine sufferers but also educating them too and helping them to live better quality lives free from the misery of migraine.

www.cefaly.co.uk

LOOKING FORWARD TO ANOTHER GREAT 50 YEARS!

MCI are proud to support The Migraine Trust’s 50th Anniversary

MCI continues to deliver unique services and solutions for their clients around the world.

To hear more about our success stories please contact us at hello@mci-group.com or the team on 01730 821 969

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Congratulations to

the

migraine

trust

50 years of helping people living with migraine get the most out of life

ALLERGAN
Founder of

eNeura

Congratulates

The Migraine Trust

on 50 years of
empowering, informing
and supporting
those affected by migraine!
How you can help

A call to arms to ensure migraineurs get the support they need

Migraine ruins people’s lives, affects all ages and is more prevalent than asthma, diabetes and epilepsy combined. That is why the Migraine Trust exists, in order to serve migraineurs and support them to manage their condition so that it is a part of their life rather than the dominant factor.

We have now reached 50 and are rightly proud of our achievements. To borrow from cricket, we will acknowledge the applause, be aware that the job is not finished and carry on in the knowledge that even greater achievements will be had if we continue to show stamina, determination and draw on the support of our partners.

The Migraine Trust will, as it moves towards its century, concentrate on three aims – widespread public and professional understanding about migraine, greatly improved patient access to existing treatment and substantially increased research into its causes and cure.

There is a lack of public and professional awareness of migraine’s cause, impact and treatments, leading to misunderstanding and stigma. Patients across the United Kingdom have unequal access at best to the treatments which could transform their lives. These factors contribute to migraine remaining undiagnosed and under-treated in at least half of patients.

With migraine affecting an estimated 15 per cent of the population, and contributing to 25 million days lost from work or school every year, without the right support employees, businesses and the British economy as a whole will continue to suffer millions of migraine-related sick days a year, many of which could be prevented with better access to treatments.

That is why we will increase our campaigns and policy work, which will involve working with health professionals, businesses and politicians to push these issues forward. This will need the ongoing support and efforts of all our supporters in raising these issues with politicians, NHS commissioners, government ministers and the media to make the biggest impact possible.

We will continue our advocacy and empowerment work, helping those whose job or education is under threat and ensuring that employers and institutions of learning understand their legal responsibilities and also how to create working or studying environments which avoid triggering migraine attacks.

We are trying to raise more funds for research so that the next generation of scientists and doctors can work on finding better treatments and that elusive cure. Professor Peter Goadsby wrote in this journal of what the future could hold with the right investment and The Migraine Trust is the only charity actively funding migraine research in leading academic institutions in the United Kingdom. We were founded as a medical research charity and remain committed to playing our part in funding and facilitating that work.

For all of this to happen requires your support. We need people to champion the cause of migraineurs in their workplace or school. We need people to lobby their Member of Parliament or local NHS. We need people to fund research.

We need you.
Thank you

The Migraine Trust would like to thank all donors, supporters, volunteers and partners – past and present – who have helped and continue to help to make our work possible.

As a small charity that receives no government funding we are particularly indebted to the many individual supporters of The Migraine Trust whose generous donations, legacies and community fundraising efforts provide the source of the majority of our funding.

We are also grateful to our corporate supporters who acknowledge the importance of patient groups such as The Migraine Trust in healthcare, and to the charitable trusts and foundations who provide grants towards our work.

Thank you to our past and present Board of Trustees and User Group members for their time, expertise, experience and feedback.

We would like to acknowledge the organisations and groups, including their members, who work with and support The Migraine Trust to help people with migraine, and raise awareness and campaign on various issues including the following:

BASH
Neurological Alliance
Sense About Science
Health Conditions in Schools Alliance
APPG for Primary Headache Disorders
Headache UK
European Headache Alliance
European Headache Federation
Association of Medical Research Charities
Chronic Pain Policy Coalition
National Council of Voluntary Organisations
National Voices
Pain UK
Institute of Fundraising
Fundraising Standards Board
ACEVO
CIPR

1971 Christmas carol singing
fundraising at Smithfield market
The Migraine Trust was founded in 1965 primarily to promote medical research into migraine.

Currently The Migraine Trust:
- Provides a comprehensive information service to the general public, health professionals, employers and the media. We have a comprehensive website and produce a journal called Migraine News
- Holds workshops and courses for GPs, nurses, health professionals and the general public
- Jointly holds the European Headache and Migraine Trust International Congress (EHMTIC) every two years for leading experts in migraine from all over the world to meet and exchange research results and ideas
- Funds research, fellowships and studentships in hospitals and universities.

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