

The MS Society

The MS Society supports health and social care professionals to develop services for people affected by multiple sclerosis (MS) based on quality standards and evidence of effectiveness. There is real hope of developing much more effective treatments for people diagnosed with MS. Many MS experts believe that within our lifetimes MS will be a condition that remains long term but is largely treatable.

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Multiple sclerosis (MS) is a devastating condition that affects three times as many women as men. It is unique in its range of symptoms and unpredictability and, although modern practice has improved a great deal, this can lead to problems in diagnosis. People can experience chronic fatigue, nerve pain, loss of sight and mobility, depression, loss of memory, mood swings, incontinence, sexual dysfunction and spasticity. For some, quality of life can be very poor. Damage caused to the central nervous system means symptoms fluctuate dramatically. Someone can feel fighting fit one day, only to wake unable to see or get out of bed the next. This can cause major problems in people's working and personal lives—as a parent, a husband, wife, or friend.

Putting the pieces together

There is no good time to get diagnosed with MS, but, thanks to advances in our understanding of MS and to developments brought about through research, there are a range of therapeutic options now available. And for the many thousands of people across the UK living with MS, research offers the greatest hope for the future. As the UK's largest single funder of MS research in the UK, the MS Society is well placed to try to turn this hope into reality. We invest million of pounds as part of our annual commitment to MS research, mostly money raised through the vital and generous support of thousands of volunteers and donors.

Research into MS offers scientists at all levels a massive and complex challenge. While there will never be the money for MS that there is for cancer and other common conditions, there are passionate, committed researchers working across the world to try to beat this illness. The main drive is ultimately toward finding a cure and we will continue to devote significant money to this, but there is a need to be realistic. The complexity of the condition means

a cure remains a distant prospect. There is real hope of developing much more effective treatments for people diagnosed with MS. Many MS experts believe that within our lifetimes MS will be a condition that remains long term but is largely treatable. With MS it seems probable that early diagnosis and intervention with a combination of drug therapies, physiotherapy and exercise, good diet, counselling and quality social care will be the answer. To put this package together we need to understand the many faces of this enigmatic, devastating disease and the key to this is research.

What lies ahead—the future of MS therapies

A range of potential therapies for MS are working their way through clinical trials at the moment. There is a strong focus on development of oral therapies, for instance, as currently all the treatments for relapsing remitting MS rely on injections. Meanwhile, pharmaceutical companies are focusing efforts on treatments targeted for the later, progressive stages of the condition—a welcome step.

Cladribine is an oral therapy that is effective against certain immune cells in the body that are thought to be misdirected in MS to attack the myelin sheath surrounding nerves. It also has a well established safety record in its treatment of cancers. Three studies to date in people with both relapsing remitting and progressive forms of MS have indicated that cladribine may be able to reduce the number and size of MS lesions, as well as reduce relapse rate and slow disability progression. Clinical trials of oral cladribine are now underway, looking at it as a sole therapy and in conjunction with beta interferon. The results are expected this spring.

Other oral treatments for relapsing remitting MS that affect the immune system include fingolimod, which has shown more than a 50% reduction in relapse rates compared with placebo controls, and laquinimod that has

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shown a 40% drop in the number of MS lesions, compared with placebo as measured by MRI.

A number of pharmaceutical companies are also carrying out phase II and III trials into oral versions of the recently licensed drug tysabri, which is currently only available as an intravenous infusion given once every four weeks. In terms of preventing progressive disability there are several promising agents in late stage clinical trials. The novel cancer and rheumatoid arthritis drug rituximab has also shown benefits when administered to people with MS, and a large-scale clinical trial of rituximab in people with primary progressive MS is ongoing.

The MS Society now funds research into symptom relief and has committed £2.5 million to projects in this area. Historically, symptom relief is an area of research that has been under-explored, but research projects focusing on pain, fatigue, depression and many other symptoms are currently underway and it is hoped that ultimately therapies and treatments might be designed that allow people affected by MS to have more control over their symptoms and a better quality of life.

Protecting nerves

One of the most distressing aspects of MS is the progressive disability that the majority of people with the condition experience over time, and there are a limited number of research projects and clinical trials to develop therapies for treating this form of the disease. The MS Society has therefore prioritised the funding of research investigating nerve damage, repair and protection and steps have been taken to address the lack of clinical trials investigating neurodegeneration and progressive forms of MS. More than £3 million has been invested into research centres in Cambridge and Edinburgh, which are investigating the use of adult stem cells along with other techniques to protect nerve fibres and promote myelin growth. For example, the mission for the MS Society Cambridge Centre for Myelin Repair is to develop new therapies for promoting myelin repair and preventing nerve fibre loss in people with MS. The centre unites existing expertise in stem cells, brain repair and MS in a focused programme of work.

To find out more about the work of the MS Society, log onto www.mssociety.org.uk, email info@mssociety.org.uk or telephone 0208 438 0700.