

A Background To The Multiple Sclerosis (Ms) National Therapy Centres Of The UK And The Republic Of Ireland

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There are more than 60 hyperbaric facilities in the British Isles owned and operated by patients to provide treatment for **multiple sclerosis**. Many of the centres have more than one chamber and so the total number of chambers is over 100. Most of the chambers are multi-place chambers which use compressed-air at pressures from 1.5 to 2 ata with oxygen provided using built in breathing systems and oro nasal masks or hoods. [Hyperbaric oxygen](#) treatment for **MS** patients

In the 1970's research in four countries indicated that patients with **MS** could obtain symptomatic relief from hyperbaric oxygen treatment. The first report was from Czechoslovakia where 26 patients had participated in a study. Benefits were described but were reported as transient. Two Italian physicians in 1978, Palotta in Naples and Zannini in Genoa also reported benefit and Baixe in Toulon presented his findings at the EUBS meeting held in Toulon in 1978. The same year Richard Neubauer published the first of two reports in the Journal of the Florida Medical Association. His second paper provided detailed information and reported that if the treatment pressure was increased to 2 ata benefits seen at a lower pressure could be lost. However he found they could be regained if treatment was resumed at a lower pressure. This was the first time that it was demonstrated that pressures as low as 1.5 ata could be therapeutic.

The UK Centres

In 1982 a small group of patients in Dundee participated in a study organised by Dr Philip James and monitored by Dr Duncan Davidson a local neurologist. Dr James had become aware of the international studies, particularly the detailed reports of Dr Richard Neubauer in Florida and he had been researching the damage to the nervous system in divers. In 1982 he published a detailed comparison of **MS** to decompression sickness in the Lancet suggesting that the first event in **MS** was due to subacute fat embolism. The article carried an addendum which described the successful treatment with hyperbaric oxygenation of a young man who developed symptoms in 1981 typical of **MS** within a few hours of an automobile accident. A two compartment chamber had been provided by an American diving company and installed in a private hospital in Dundee for the treatment of a traumatic leg injury in a company employee. Five **MS** patients were recruited, examined and treated in the spring of 1982.

The chamber was transferred back to Aberdeen in the summer but the **MS** patients wanted to continue the oxygen treatment. An old aviation chamber which had been used to study decompression sickness in aviators at the Institute of Aviation Medicine at Farnborough during WW2 was subsequently found on a farm in Bedford. It had been converted for use in diving and was transported to Scotland and installed in a unit on an industrial estate in Dundee. The enthusiasm of patients was supported by the presentation of the results of the double-blind controlled trial in New York University at a hyperbaric meeting in Long Beach in June of 1982. The study was finally published in the *New England Journal of Medicine* January 27th 1983. The trial, which cost \$250,000, had been funded by the **National Multiple Sclerosis Society of America**.

Some publicity in the *Sunday Times* had resulted from the treatment of an eye disorder in a young doctor with **MS** and soon the waiting list in Dundee climbed to 400 patients. The Dundee centre provided the model for other centres with the aid of an already established charity, **Action and Research into Multiple Sclerosis (ARMS)**. This charity headed by the husband of an **MS** sufferer, John Simkins, had been formed as a breakaway movement from the **MS Society of the UK** in 1974. Its theme was Self Help and a number of small research programmes were being supported. The hyperbaric centres which were all registered as independent charities were known as **Friends of ARMS**. By 1984 Dr David Perrins who had returned from working in Sweden with Dr Per Oluf Barr became involved with one of the centres in Abingdon near Oxford. He witnessed the changes in patients from oxygen treatment and was soon employed on a part time basis by **ARMS** to collect results from the centres. By the end of the 1980's over forty centres had been established and the growth has continued with the latest centre opening in Cardigan, Wales in 2003.

Starting in 1995 several of the centres in the UK provided hyperbaric treatment for children with cerebral palsy after the Hyperbaric Oxygen Trust had been formed by Linda Scotson. Her son Doran had developed brain injury associated with jaundice shortly after birth. He was 14 when he started hyperbaric treatment under the supervision of Dr James and his significant benefits were confirmed by his school teachers and even by neighbours unaware that he was having any treatment. The Trust, which has now changed its name to Advance, treated several children from Canada and their mothers on returning to Canada pressured the government into funding the hyperbaric trials in children with CP

supervised by Dr Pierre Marois. Much work has been done to make parents aware of hyperbaric oxygen treatment, especially via the Internet, and many parents from the USA, Canada and Europe continue to bring their children to the UK for treatment because it is more affordable in a not-for-profit charity setting.

The charity **ARMS** was made insolvent in the early 1990's but the centres continued and eventually formed the **MS National Therapy Centres**. The centres in the UK are registered non-profit-making charities and limited companies. Charities in the UK must by law be registered with the Charity Commissioners, established by law to regulate their activities. The centres are privately operated and fully insured and regularly inspected by the insurers and the Health & Safety Executive as well as being recognised by and registered with the Healthcare Commission. This organisation is underpinned by the Private and Voluntary Healthcare Regulations which recognises hyperbaric treatment for 'neurological conditions' such as **MS** and Cerebral Palsy. Many of the HDOT centres have been upgraded and rebuilt. The centre in the town of Reading was rebuilt at a cost of £1 million, through private fundraising activities and donations, and opened in a special ceremony by The Princess Royal, HRH Princess Anne in 1998.

The safety record of the centres is remarkable and over the last 20 years there have been in excess of 1.6 million hours of treatment involving over 16,000 **MS** patients. During that time there has not been a single significant patient incident or injury. An accumulated valuable statistic from the centres indicates that 80% of people with **MS** who have started HBOT, and continued, have derived benefit in the management of their symptoms.

The centres are uniquely recognised as a self help movement in which patients can access treatment by self referral. Being independent they do not receive funding from the State or local authorities and are financed entirely by voluntary donations and fundraising activities organised by a board of volunteer Trustees. Most have full-time paid Managers with other helpers being unpaid volunteers who are either part of the executive committee or help in the operation of the pressure chamber or fundraising activities. People attending the centres join the centre, pay an annual membership fee of £10 and make a donation towards the cost of each treatment session.

New members are asked to notify their own doctor of their intention to commence HBOT. As in every country the attitude of the medical community is a combination of outright opposition or a tacit compliance and acceptance. Non-profit-making charities being tax exempt are not permitted to charge for treatment but they are permitted to ask for a voluntary donation. Most centres ask for a donation of £8 towards the cost of each one-hour session. However, the centres act on the principles of the NHS (National Health Service) whereby people receive treatment according to need and not according to their ability to pay. People who cannot afford any donations receive treatment free.

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Medical information provided by Professor Philip James.

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