

Final report summary:

A Very Early Rehabilitation Trial - UK

(AVERT-UK)

A clinical trial of very early rehabilitation for people affected by stroke.

PROJECT CODE: TSA 2009/09

PRINCIPAL INVESTIGATOR: PROFESSOR PETER LANGHORNE

INSTITUTION: UNIVERSITY OF GLASGOW

Why did we fund this research?

Early rehabilitation represents a simple treatment that could readily be provided for the majority of people who are admitted to hospital with a stroke. If the treatment is effective in reducing death and disability, changing practice in hospitals to incorporate early rehabilitation could have major benefits for people who suffer a stroke in the future.

Early rehabilitation after stroke is also recommended in many clinical practice guidelines worldwide. However, the exact timing and amount of mobilisation is vaguely stated due to a lack of good quality evidence.

The AVERT (A Very Early Rehabilitation Trial) aimed to address this question and involved recruitment of acute stroke patients receiving care in dedicated stroke units. Eligible patients who consented to participation in the study were randomly assigned to one of two groups:

- i) a control group who received usual post stroke care
- ii) a treatment group who received usual post stroke care, but in addition were assisted to get out of bed within 24 hours of their stroke and then frequently mobilised out of bed by trained nurses and physiotherapists according to a specified protocol.

The treatment continued for six days a week for the first 14 days after stroke or until discharge from the stroke unit (whichever came first). All participants were followed up, both at three months and 12 months after the patient's stroke.

This major trial was the first large, multi-centre, single blind, randomised controlled trial of very early rehabilitation in the world. It began in Australia but later developed into an international, multicentre trial.

The first phase of the AVERT program was to determine baseline physical activity patterns of patients managed in stroke units. It found that stroke patients can spend over 50% of the therapeutic day in bed and alone in the acute phase of their care. Following this work, a pilot study supported by the National Heart Foundation of Australia assessed the safety and feasibility of a new mobilisation protocol in 71 patients in Melbourne, Australia between 2004 and 2006, showing promising results.

Financial support by the National Health and Medical Research Council enabled the launch of a large phase 3 efficacy trial (AVERT Phase 3) in Australia early in 2006. By 2007, AVERT had become international, expanding to involve hospitals in New Zealand, Singapore and Malaysia.

Thereafter, between 2009 and 2010, several sites in Scotland and Northern Ireland were established, with the financial support of the charities Chest Heart and Stroke Scotland, and Chest Heart and Stroke Northern Ireland. With Stroke Association support and a strong collaboration between Australia and researchers at the University of Glasgow, the main UK phase of the project (AVERT-UK) was able to commence in August 2010. AVERT-UK aimed to provide a substantial UK contribution to the AVERT Phase 3 trial.

The trial further expanded to include many more hospitals in the UK with this substantial funding by researchers at the University of Glasgow with support from the University of Newcastle and University of Southampton. Funding allowed the co-ordination of AVERT UK, and included the recruitment and follow up of patients between August 2010 and December 2013.



Stroke survivor helped with physical, out of bed rehabilitation.

During the start-up period, emphasis was placed on obtaining ethics and governance approval, and reaching out to the UK stroke research community for expressions of interest from sites. Those with interest and the capability to run the trial were selected and trained to participate in the trial.

The team also maintained the established sites in Scotland and Northern Ireland, taking on the management of the hospitals that continued recruitment to AVERT. The final year of TSA funding was devoted to securing sites and supporting recruitment in all four countries of the UK.

Over the course of the Stroke Association funding, the research team compiled a dossier of over 40 new interested sites across the UK; enrolled a total of 18 new AVERT sites (achieving a total of 30); and continued publicity and other support activity, including the convening of collaborators meetings.

By December 2013, AVERT-UK had recruited 382 UK patients, surpassing its target of recruiting 300 patients since the start of the Stroke Association funding. This brought the total number of UK patients recruited to the trial to 459.

The final phase of AVERT-UK was funded by the National Institute of Health Research. In April 2015, the main results from the international AVERT trial were presented in Glasgow and also published in the UK medical journal, *The Lancet*. The total number of patients recruited to the study worldwide was 2104. Of these, the number of patients recruited from AVERT-UK had risen to 610. Recruitment in Australia reached 1054 patients, Singapore 128 patients, New Zealand 189 patients and Malaysia 123 patients.

What did the research find?

The early results from this large phase 3 trial have indicated that contrary to expectation, the higher dose, very early out of bed mobilisation protocol was associated with a reduction in the likelihood of a favourable outcome for patients 3 months after their stroke.

It was concluded that the idea of 'more rehabilitation is better', may not apply in the early days after stroke. Overall, there were low rates of deaths and serious adverse events in both arms of the study; however, the amount of rehabilitation versus the benefits or harm needs to be further analysed.

The data in this trial was of very high quality with protocol being met and very few patients dropping out. This has provided the best opportunity yet to determine best practice after stroke and further inform clinical guidelines. Significant further analysis of the trial data will help reveal the components of care that lead to benefit or harm and this is now a priority for the researchers.

What does this mean for stroke survivors?

The early findings from this trial suggest that existing stroke unit care is better than very early high intensity rehabilitation post stroke. The clinical guidelines for best care will be influenced by the results of this trial following further dose response analyses of the trial data.

We are the Stroke Association

The Stroke Association is the leading stroke charity in the UK. We believe in the power of research to save lives, prevent stroke and ensure that people make the best recovery they can after a stroke.

We're here for you. If you'd like to know more, please get in touch.

Stroke Helpline: 0303 3033 100

Website: stroke.org.uk

Email: info@stroke.org.uk

From a textphone: 18001 0303 3033 100

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