# Alteplase treatment reduces long-term disability and improves quality of life in stroke survivors and could cut costs of aftercare

****Embargo: 00:01 [UK time] Friday 21 June, 2013****

New research published **Online First** in ***The Lancet Neurology*** indicates that giving the clot-busting drug alteplase up to 6 hours after a stroke reduces long-term disability, significantly increases the likelihood of independence, and improves quality of life in stroke survivors of all ages for up to 18 months after treatment.

The latest results from the third International Stroke Trial (IST-3) suggest that the drug has the potential to cut costs by reducing the demand for long-term care.

"In the UK in 2002, the estimated annual cost of long-term care of an independent survivor of stroke and a dependent survivor were £876 and £11 292 respectively, so even a small difference in the proportion of survivors who are able to look after themselves will have significant economic impact"*****, explains Peter Sandercock from the University of Edinburgh's Division of Clinical Neurosciences who led the research.

Treatment for acute ischemic stroke (in which blood flow to an area of the brain is blocked or reduced) with alteplase (recombinant tissue plasminogen activator; rtPA) is approved in Europe for patients younger than 80 years within 4.5 hours of symptom onset. Currently, fewer than 15% to 40% of people arrive at the hospital within this treatment window, and only 2% to 5% of suitable patients receive thrombolysis.

In 2012, the IST-3 involving 3035 patients (half older than 80 years of age) from 12 countries, reported that those randomly assigned to alteplase treatment within 6 hours of stroke onset had reduced disability at 6 months compared with those who did not receive the drug.

Here, the IST-3 Collaborative Group report the survival, functional outcome, health-related quality of life, and living circumstances of nearly four fifths (2348 patients) of participants from 10 countries****** at 18 months.

Although treatment had no effect on survival at 18 months, the odds of being alive and independent were 28% greater for patients given alteplase.

What is more, participants given alteplase reported significantly fewer problems with long-term mobility, self-care, pain and discomfort, and "needing help with everyday activities".

According to the IST-3 Collaborative Group, "IST-3 shows evidence of improvement in several measures of function and quality of life in survivors of all ages, for up to 18 months after treatment."

Commenting on the paper, Craig Anderson from The George Institute for Global Health at the University of Sydney, Australia writes, "The IST3 Investigators are to be commended in providing a more comprehensive patient-centred approach to assessing the effects of rtPA treatment on different domains of daily life and health experience than has previously been done in clinical trials…Assessing health-related quality of life extends the interpretation of outcomes and adds relevant information for decision-making about the efficacy of treatment that reflects the patients' perspective."

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**Notes to Editors:**
***Quote direct from author and cannot be found in text of Article.**
****UK, Austria, Belgium, Norway, Sweden, Australia, Italy, Poland, Canada, and Mexico.**

**For full Article and Comment: http://press.thelancet.com/alteplase.pdf**

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