Information for patients from JNNP

Using technology to ease the strain on carers

When someone has a brain injury, either from a head injury or from an illness such as a stroke or a brain tumour, they're not the only one affected. Partners, parents, and children often find their own lives change too, as they become carers for their family member at home. Caring for someone with a brain injury can be a tough job, so anything that helps ease the strain is good news.

What do we know already?
People with brain injuries frequently have memory problems and difficulties with planning. These two issues can make life very difficult for their carers. For example, people with brain injuries may forget to take their medicines unless prompted. And they may have difficulty making and keeping appointments, or they may leave the house without remembering to take their keys.
Researchers have been investigating ways of using technology to help people with brain injuries better manage everyday life. The technology being tested in this study is called NeuroPage. It's a small pager that can be worn by the person with brain injury. The pager can be programmed to send reminders when it's time to carry out tasks such as taking medicine. Previous studies show it can help some patients with memory and planning problems.

What does the new study say?
The new study looks at the effect of the NeuroPage device on carers of people with brain injuries. It says that, overall, carers have a small to medium reduction in their stress levels, measured by questionnaire, after the person they care for has used the pager for seven weeks. About two-thirds of carers had lower stress scores after use of the pager.
Perhaps surprisingly, the reduction in stress lasted even after the pager had been taken away.

How reliable are the findings
This is a fairly small study, involving just 90 people. In the most reliable type of study, researchers compare a treatment with an inactive but identical version of the same treatment (often called a placebo), to find out whether it's really the treatment that makes the difference. That's easy
to do with medicines, but not with devices like pagers, as people need to
know whether the pager is being used.
Instead, the researchers divided the people in the study into two groups: one
group got the pager straight away, while the other group waited seven weeks
before using the pager. In both groups, the carers filled out questionnaires
about their stress levels before and after using the pagers. Stress levels
stayed the same while people were waiting for the pager, but reduced during
the seven weeks that it was being used. This suggests that it was the pager,
not just being in a study, that helped reduce stress.

Where does the study come from?
The study was carried out several hospitals and universities, in the UK and in
Denmark.

What does this mean for me?
If you are caring for someone with a brain injury, and find that memory and
planning are causing problems, this study suggests using a technology such
as the NeuroPage device may help. However, the effect on your stress levels
may not be that big. Average stress scores reduced by 1 to 2 points, on a 10-
point scale.
Most people in the study had been affected by a head injury, not a stroke.
Their average age was 33 at the time of their brain injury. So we don't know
from this study how well the pager device would work for older people with
brain damage.

What should I do now?
If you are struggling to cope with stress from caring for a relative or partner
with brain injury, you might want to talk to their doctor about assistive
technologies. That's the general name for technology that helps people get on
with their lives, despite problems such as memory loss or difficulties thinking
or planning. There are a number of different assistive technology devices
available, and the doctor may be able to help you find one that is suitable for
the person you are caring for.

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Teasdale TW, Emslie H, Quirk K, et al. Alleviation of carer strain during the use of the
NeuroPage device by people with acquired brain injury. J Neurol Neurosurg Psychiatry
2009;80:781-83. http://jnnp.bmj.com/cgi/content/full/80/7/781