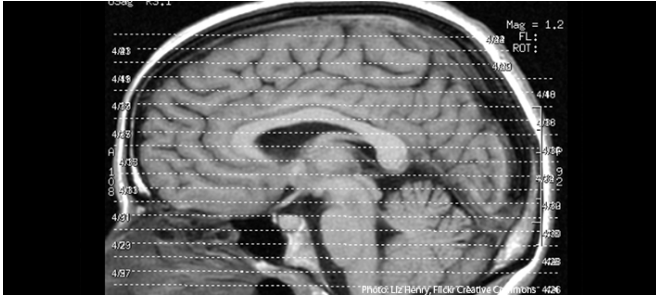


# Common medications could delay brain injury recovery

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Drugs used to treat common complaints could delay the recovery of brain injury patients according to research led by University of East Anglia (UEA) scientists working with other UK universities including Aston and the NHS, published today in *Brain Injury*.

Prescribed for up to 50 per cent of older people, medications with anticholinergic properties are used to treat a broad range of common conditions including bladder problems, depression and insomnia.

Anticholinergics are already known to have side effects such as temporary [cognitive impairment](#), dizziness and confusion. But their effects on people with pre-existing brain and spinal injuries have not been investigated until now.

Medications with anti-cholinergic properties are often used on neuro-rehabilitation units frequently to manage symptoms from urinary incontinence to pain.

The study of 52 [patients](#) with acquired brain or [spinal injury](#) at a neuro-rehabilitation unit showed that the average length of stay was longer in patients with a higher level of anticholinergic drugs

in their system, known as the anticholinergic drug burden, or ACB.

Results showed that the change in ACB correlated directly to the length of hospital stay. A higher ACB score on discharge, compared with on admission, was associated with a longer stay in hospital and a lower ACB on discharge saw on average a shorter stay. The team cautioned however that as an observational study, cause-and-effect relationship cannot be implied.

Dr Chris Fox, Professor of Clinical Psychiatry at the Norwich Medical School at UEA and lead author on the paper, said: "The findings suggest there may be a statistically significant relationship between ACB score and length of stay in a neuro-rehabilitation unit following traumatic brain or spinal cord injury".

He added: "This pilot study demonstrates the need for larger studies to confirm the results and need for further investigation into what long-term effects these common medications are having on the recovery of these patients."

"While medications with ACB are often needed to treat common complications of brain or [spinal cord injuries](#), cognitive impairment due to the medication may adversely affect a patient's ability to engage in the rehabilitation process, potentially increasing their length of stay in hospital."

Length of patient stay is used a performance indicator for hospitals, with financial incentives in place for units to discharge patients as soon as is safe.

Dr Ian Maidment, Senior Lecturer in Clinical Pharmacy at Aston University said: "This work adds to the evidence that anticholinergics should be avoided in a wide-range of populations, when possible. Regular medication review by a nurse, doctor or pharmacist may be a way of ensuring that medicines with anti-cholinergic effects are used

appropriately."

Prof Fox said: "Identifying factors which might adversely affect the length of a patient's stay can have important financial as well as quality of life implications. So the findings of this study could be directly useful to current health care settings if they can reduce the time patients spend in rehabilitation units, improving wider efficiency of care."

"Does anticholinergics drug burden relate to global neuro-disability outcome measures and length of [hospital stay](#)?" is published in the journal *Brain Injury* on Monday 10 August 2015.

Provided by University of East Anglia

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