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body&soul

**Jack Kerouac and the lethal time bomb
that can be caused by a head injury**

Dr Mark Porter



Speculation in yesterday's *Times* that the death of one of America's foremost writers may have been hastened by long-term complications of head injuries sustained on the football field got me thinking. At first glance the exact nature of Jack Kerouac's premature demise more than 40 years ago may not appear to have much relevance today, but if brain trauma did play a role then his story is far from unusual.

About a million people with head injuries are seen in A&E departments every year in the UK and there is growing concern that doctors are missing a common complication that may not become apparent for months, sometimes years, after discharge.

Post-traumatic hypopituitarism (PTHP) occurs when the pituitary gland — a vulnerable walnut-sized structure at the base of the brain — is damaged following a blow to the head. The gland regulates the actions of eight key hormones controlling everything from the immune system and the thyroid to growth, puberty, sex drive and fertility. It acts like the conductor of an orchestra, ensuring that the right amount of hormone is released at the right time. Chaos ensues if it stops working properly.

The resulting symptoms vary depending on the degree of injury and the hormones affected, but may include lethargy, fatigue, weakness, loss of sex drive and infertility, as well as difficulty getting an erection in men and the loss of periods in women. All of which can be easily attributed to conditions ranging from stress and depression to ME and the menopause — and herein lies the problem. Awareness of PTHP is so poor that it is often missed.

It is unclear just how common PTHP is, but every expert I have spoken to agrees on one thing: the few

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hundred or so cases that are officially diagnosed in the UK every year are just a fraction of the number affected by the condition.

When I say fraction I really do mean the tiniest of proportions, with some estimates suggesting that there are currently as many as a half a million people in the UK with some degree of PTHP.

You don't need to crash a motorbike or fall off a high ladder to be at risk. The worse the injury the greater the likelihood of PTHP (among other complications), but even people who are briefly knocked out following a relatively trivial blow, or dazed and confused after a tackle on the rugby

pitch, can develop problems later.

The first step to improving pick-up is to increase awareness of PTHP — among both the public and healthcare professionals — so that the diagnosis is considered in anyone who sustains a significant head injury. The Army already routinely screens injured soldiers for the condition. The NHS does not.

The next step is to test for pituitary-related hormone dysfunction in people who go on to develop suggestive symptoms. This can start with your GP, who can do routine blood tests (best done at 9am as some hormones fluctuate throughout the day) to assess pituitary function.

These are not always definitive, but a normal set of results is very reassuring and suggests a cause other than PTHP. While abnormal results don't necessarily confirm a pituitary problem either, they should prompt referral to a specialist for more detailed investigation.

Fortunately, once diagnosed, PTHP is a relatively simple and rewarding condition to treat. Therapy centres on replacing the missing hormones. These vary from case to case but typically include thyroid hormone, testosterone for men, oestrogen for women, and growth hormone and/or steroids to support the immune system.

While it can take a few weeks for some systems to normalise, the response to therapy tends to be dramatic, with many patients looking and feeling better within days.

What of our American novelist and poet? We will never know for sure what happened to Jack Kerouac, but while recent speculation about the long-term effects of head injury can't help him, it might just help quite a few others.

For more information on the diagnosis and treatment of PTHP visit headinjuryhypo.org.uk

Get to know your pituitary gland

■ The pituitary gland produces eight main hormones: ACTH (controls adrenals), ADH (kidney), FSH & LH (testicles and ovaries), GH (growth), oxytocin (labour and lactation), prolactin (lactation) and TSH (thyroid gland).

■ Total pituitary failure requires treatment with at least five different hormones, at a cost of about £5,000 a year.

■ If missed, the most serious forms of PTHP can be fatal.