**Traumatic brain injury and hypopituitarism**

**Brain injury may cause damage to the hypothalamus and/or pituitary gland. Although the true incidence of brain injury and hypopituitarism remains unclear, the *poor outcome for patients who go* *unrecognised could be devastating*, with morbidity and the potential for mortality.**

Therefore, it is important to raise awareness of this issue amongst primary health care professionals. Most patients recover quickly from their head injury and experience no long-term problems. However, some patients can develop problems after a few weeks, months or sometimes, years.

**Hypopituitarism**

Hormone deficiency caused by the inadequate secretion of one or more of the hormones normally secreted by the pituitary, is known as hypopituitarism. It may commonly be caused by compression of the normal pituitary tissue by an enlarging pituitary tumour, by pituitary surgery, or radiotherapy. It should, however, be emphasised that documented combined hypopituitarism after head injury is uncommon, and if it does occur it may have been associated with very significant head injury.

**Presenting symptoms**

|  |  |
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| **Deficient hormone** | **Symptoms** |
| **GH** (Growth Hormone) | Children: Growth retardation Adults: Excessive tiredness, muscle weakness, lack of drive, impaired quality of life scores |
| **FSH/LH**  ( >secondary hypogonadism) | Hypogonadism – In men: reduced facial and body hair, low libido, impotence. In women: amenorrhoea, reduced libido, dyspareunia and hot flushes |
| **TSH** (> secondary thyroid deficiency) | Weight gain, decreased energy, sensitivity to cold, constipation, dry skin |
| **ACTH** (> secondary adrenal deficiency) | Pale appearance, weight loss, low blood pressure, dizziness, tiredness; ‘collapse’ during intercurrent illness |
| **AVP/ADH** (arginine vasopressin or  Anti-Diuretic Hormone) | Thirst, polyuria and nocturia – diabetes insipidus |

**Investigations**

Tests for hypopituitarism should be performed under the guidance of an endocrinologist. Please see ‘Who and When to Refer’ (factsheet no: 15) Please also see ‘Hypopituitarism’ Factsheet no: 6 for explanation of hormone investigations, treatment possibilities, management and watch points.

**Resources for patients** available from The Pituitary Foundation Helpline or our website [www.pituitary.org.uk](http://www.pituitary.org.uk) or our Endocrine Nurse Helpline Other information and resource links available at [www.pituitary.org.uk](http://www.pituitary.org.uk)

**For GPs** Endotext.org ‘Your Endocrine Source’ [www.endotext.org](http://www.endotext.org) ([www.endotext.org/neuroendo/](http://www.endotext.org/neuroendo/)index.htm) The Pituitary Foundation Website

[www.pituitary.org.uk](http://www.pituitary.org.uk) *Oxford Handbook of Endocrinology* *and Diabetes* 2nd Edition OUP (2010) JAH Wass & PM Stewart (Eds) *NICE guidance of growth hormone* *in adults* <http://www.nice.org.uk>

**Pituitary Disease Fact File**

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