

## High dose vitamin D speeds recovery from tuberculosis

A study led by researchers at Queen Mary, University of London has shown that high doses of vitamin D, given in addition to antibiotic treatment, appear to help patients with tuberculosis recover more quickly (Coussens et al, 2012).

Dr Adrian Martineau, senior lecturer in respiratory infection and immunity at the Blizard Institute, part of Queen Mary, University of London, who led the research, and his colleagues from a number of London hospitals and institutions randomized 95 tuberculosis patients receiving standard antibiotic treatment into two groups: for the first 8 weeks of their treat-

ment, 44 received additional high dose vitamin D, while 51 received a placebo.

Dr Anna Coussens at the Medical Research Council's National Institute for Medical Research measured levels of inflammatory markers in blood samples taken from these patients, and conducted statistical analyses to determine the effects that vitamin D had on the immune response.

**Dr Adrian Martineau, Senior Lecturer in Respiratory Infection and Immunity, Queen Mary, University of London**



'We found that a large number of these inflammatory markers fell further and faster in patients receiving vitamin D,' said Dr Coussens.

The researchers also found that *Mycobacterium tuberculosis* was cleared from the patients' sputum faster in those who were taking vitamin D, taking an average of 23 days to become undetectable under the microscope compared to

36 days in patients taking the placebo.

The research findings indicate that high doses of the vitamin can dampen down the body's inflammatory response to infection, enabling patients to recover faster, with less damage to their lungs.

The authors say their results suggest that vitamin D supplementation might help patients recover better from other diseases such as pneumonia.

Coussens AK, Wilkinson RJ, Hanifa Y et al (2012) Vitamin D accelerates resolution of inflammatory responses during tuberculosis treatment. *Proc Natl Acad Sci U S A* 109(38): 15449–54

### Hospital non-compliance risking joint patient safety

Local NHS trusts and health boards could be putting the long-term safety of patients at risk in failing to comply with the now-mandatory National Joint Registry.

The National Joint Registry records data on hip, knee, ankles, elbow and shoulder replacements for England and Wales. Analysis of this information for all patients provides clinical evidence to protect patient safety and improve patient care. The National Joint Registry is the largest registry of its type in the world.

For the first time, the publication of the 9th National Joint Registry Annual Report includes individual hospital data which reveal that 40% (59 out of 148) of relevant NHS trusts and health boards submitted between 0% and 79% of the hip and knee replacement operations performed in 2011 – classifying

them as 'red' in the National Joint Registry's red, amber, green analysis classification.

The Department of Health made National Joint Registry compliance mandatory as of 1 April 2011, and the figures cover the period 1 January 2011 to 31 December 2011. But while the first 3 months of 2011 were non-mandatory, during this time hospitals were strongly encouraged to comply fully with the National Joint Registry.

Other indicators for the new trust-, health board- and hospital-level data analysis include patient consent and linkability as well as mortality rates, hip revision and knee revision rates for the period 2003–2011.

National Joint Registry (2012) *National Joint Registry for England and Wales. 9th Annual Report 2012*. <http://news.hqip.org.uk/t/j-l-gudkud-fwuktd-h/> (accessed 27 September 2012)

### Whole-genome scan helps select best therapy for neuroblastoma

A whole-genome scan to identify large-scale chromosomal damage can help doctors choose the best treatment option for children with neuroblastoma, finds an international collaboration jointly led by The Institute of Cancer Research, London (Schleiermacher et al, 2012).

Scientists examined the medical records of 8800 neuroblastoma patients from around the world and found that several large-scale genetic faults were strongly linked to survival rates, and that a whole-genome scan would therefore be more effective at predicting prognosis than tests for individual genetic factors.

Senior author Professor Andy Pearson, Cancer Research UK professor of paediatric oncology at The Institute of Cancer Research and a paediatric consultant at

The Royal Marsden NHS Foundation Trust, said: 'Our study has found that every single patient diagnosed with neuroblastoma should have a whole genome assessment.'

He continued: 'The technology required to carry out these scans has become much more widely available and cheaper over recent years, and we believe most diagnostic labs in developed countries worldwide should have this capacity. These gene tests would help doctors provide a more accurate prognosis and decide the best treatment for their patients, which could potentially save more lives and spare other children the risk of serious side-effects.'

Schleiermacher G, Mosseri V, London WB et al (2012) Segmental chromosomal alterations have prognostic impact in neuroblastoma: a report from the INRG project. *Br J Cancer* Sep 13 (Epub ahead of print)