|  |  |
| --- | --- |
| |  | | --- | | **C. difficile increases risk of death sixfold in patients with inflammatory bowel disease**  Patients admitted to hospital with inflammatory bowel disease (IBD) face a sixfold greater risk of death if they become infected with Clostridium difficile, a new study has found | |

|  |
| --- |
| **Patients admitted to hospital with inflammatory bowel disease (IBD) face a sixfold greater risk of death if they become infected with *Clostridium difficile*, a new** [**study**](http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2036.2011.04661.x/abstract) **has found.**  **The researchers say IBD patients should be screened on admission to protect them from serious illness.**  IBD, consisting of Crohn’s disease and ulcerative colitis, affects around 240,000 people in the UK and its symptoms include abdominal pain and diarrhoea.  When sufferers experience a bout of severe symptoms, they often need to be admitted to hospital.  *C. difficile* bacteria are present naturally in the gut in around two thirds of children and 3 per cent of adults, but they do not cause problems in healthy people.  Broad spectrum antibiotics can cause problems by killing harmless bacteria that usually reside in the gut, allowing *C. difficile* to flourish and produce toxins that cause diarrhoea and fever.  The infection is rarely fatal in people who are not already severely ill or elderly; a [review](http://www.ncbi.nlm.nih.gov/pubmed/20361997) published in 2010 estimated the overall mortality rate for patients with *C. difficile* to be 6 per cent.  There have been drives to reduce the spread of infection by improving hospital hygiene and changing antibiotic policies, which have had some success, but there are concerns that high-risk patients are still not adequately protected.  Since IBD patients already have inflammation in the gut, they are thought to be especially vulnerable to *C. difficile* infection, but until now the incidence of infection in these patients in the UK was not known.  In today’s study, published in the journal [Alimentary Pharmacology and Therapeutics](http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2036.2011.04661.x/abstract), researchers from Imperial College London and [St George’s Healthcare NHS Trust](http://www.stgeorges.nhs.uk/) examined NHS statistics on patient admissions between 2002 and 2008.  After adjusting for differences between the groups, they found that IBD patients who contract *C. difficile* in hospital are six times more likely to die in hospital than patients who are admitted for IBD alone.  In the patients followed in the study, the mortality rate for IBD patients with *C. difficile* at 30 days was 25 per cent, compared with 3 per cent for patients with IBD alone.  The results also showed that IBD patients with *C. difficile* also stay in hospital for longer, with a median length of stay of 26 days compared with five days, and are almost twice as likely to need gastrointestinal surgery.  [Dr Sonia Saxena](http://www1.imperial.ac.uk/medicine/people/s.saxena/), from the [School of Public Health](http://www1.imperial.ac.uk/publichealth/) at Imperial College London, said: “Hospitals must do everything they can to control infections such as *C. difficile*.  It seems that a higher proportion of IBD patients seem to acquire the infection in the community without exposure to antibiotics, and our study shows that IBD patients face a serious risk of dying if they also have *C. difficile*.  We are asking for these high-risk patients to be screened for proactively on admission to hospital so that if they have *C. difficile*, they can be diagnosed and treated more quickly.”  Dr Richard Pollok, from [St George’s Healthcare NHS Trust](http://www.stgeorges.nhs.uk/), who was the senior author of the study, said: “At St. George’s Hospital, we have seen a 70 per cent reduction in hospital-acquired infections after implementing a range of control measures, such as careful handwashing and reduced use of broad spectrum antibiotics.  But we need to do more to protect vulnerable patients such as those with IBD.”  The research was supported by the [National Institute for Health Research](http://www.nihr.ac.uk/Pages/default.aspx), through the [Biomedical Research Centre](http://imperialbrc.org/) (BRC) and the [Collaboration for Leadership in Applied Health Research and Care](http://www.clahrc-northwestlondon.nihr.ac.uk/) (CLAHRC) funding schemes, and the [Centre for Infection Prevention and Management](http://www1.imperial.ac.uk/medicine/about/institutes/cipm/) funded by the [UK Clinical Research Collaboration](http://www.ukcrc.org/). [Dr Min-Hua Jen](https://www1.imperial.ac.uk/medicine/people/m.h.jen/), the first author of the study, is supported by [HERON Evidence Development Limited](http://www.heronhealth.com/).  **See also:**   * [Alimentary Pharmacology and Therapeutics](http://www.blackwellpublishing.com/journal.asp?ref=0269-2813) * [St George's Healthcare NHS Trust](http://www.stgeorges.nhs.uk) * [National Institute of Health Research](http://www.nihr.ac.uk) * [NIHR CLAHRC for Northwest London](http://www.clahrc-northwestlondon.nihr.ac.uk/) * [UK Clinical Research Collaboration](http://www.ukcrc.org/) * [Heron Evidence Development Limited](http://www.heronhealth.com/)   **For further information please contact:**  Sam Wong  Research Media Officer  Imperial College London  Email: [sam.wong@imperial.ac.uk](mailto:sam.wong@imperial.ac.uk)  Tel: +44(0)20 7594 2198  Out of hours duty press officer: +44(0)7803 886 248  **Notes to editors:**  1. Journal reference: M.H. Jen et al. “Increased health burden associated with Clostridium difficile diarrhoea in patients with inflammatory bowel disease.” *Alimentary Pharmacology and Therapeutics*, published [online](http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2036.2011.04661.x/abstract) 20 April 2011.  The review of mortality rates was: J.A. Karas et al. “[A review of mortality due to Clostridium difficile infection](http://www.ncbi.nlm.nih.gov/pubmed/20361997).” Journal of Infection (2010) 61, 1-8.  2. About Imperial College London  Consistently rated amongst the world's best universities, Imperial College London is a science-based institution with a reputation for excellence in teaching and research that attracts 14,000 students and 6,000 staff of the highest international quality. Innovative research at the College explores the interface between science, medicine, engineering and business, delivering practical solutions that improve quality of life and the environment - underpinned by a dynamic enterprise culture.  Since its foundation in 1907, Imperial's contributions to society have included the discovery of penicillin, the development of holography and the foundations of fibre optics. This commitment to the application of research for the benefit of all continues today, with current focuses including interdisciplinary collaborations to improve global health, tackle climate change, develop sustainable sources of energy and address security challenges.  In 2007, Imperial College London and Imperial College Healthcare NHS Trust formed the UK's first Academic Health Science Centre. This unique partnership aims to improve the quality of life of patients and populations by taking new discoveries and translating them into new therapies as quickly as possible.  Website: [www.imperial.ac.uk](http://www.imperial.ac.uk)  3. About St George’s Healthcare NHS Trust  With thousands of staff caring for patients around the clock, St George's Healthcare NHS Trust is one of the largest healthcare providers in London. Its main site, St George’s Hospital in Tooting – one of the country’s principal teaching hospitals – is shared with St George's, University of London, which trains medical students and carries out advanced medical research. The trust also run the Wolfson Neurorehabilitation Centre in Wimbledon, which cares for patients with neurological conditions, such as stroke and spinal injuries.  As well as acute hospital services, St George’s Healthcare provides a wide variety of specialist and community hospital based care and a full range of community services to children, adults, older people and people with learning disabilities. These services are provided from Queen Mary’s Hospital, Roehampton, 11 health centres and clinics, schools and nurseries, patients' homes and Wandsworth Prison.  Website: <http://www.stgeorges.nhs.uk/> |