



# Therapeutics Today

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**Traveller's diarrhoea** (TD) affects up to 15 million people each year. It is usually defined as passing  $\geq 3$  unformed stools within 24 hours by a traveller, accompanied by symptoms including cramps, nausea, fever, bloody stools, vomiting and faecal urgency (*BMJ* 2011;342:d2978). Those travelling in developing countries are most at risk with rates between 20-90% for each two week stay. The duration of symptoms is important in determining the causes of TD, which can be both infective and non-infective. **Up to 75% of acute cases of TD (< 2 weeks duration) are**

**caused by bacteria** most commonly *Escherichia coli* but also campylobacter, salmonella and shigella. Viruses account for up to 20% and parasitic agents for up to 5% of cases. *Vibrio cholerae* is uncommon, however it should be considered if the patient has returned from an area with an outbreak. Diarrhoea can also be the presenting symptom of sepsis from conditions including pneumonia and urinary tract infection. For patients with TD of > 2 weeks duration, non infective causes should be considered including post-infective malabsorption, irritable bowel syndrome, inflammatory bowel disease, coeliac disease, malignancy and hyperthyroidism. Assessment requires a good travel and clinical history. Although a causative agent is often not found, stool microscopy for ova, cysts, parasites and culture should be performed in a returning traveller. Other investigations including FBC, blood film, WCC, CRP, ESR, renal and hepatic function should also be considered. Rehydration is the main aspect of treatment. Anti-motility agents which are often self-administered should be avoided if there is fever and bloody diarrhoea as they may prolong the illness. Antimicrobials may shorten the duration of the illness in the acute phase, however should be limited to moderate (> 2 stools/24 hrs with distressing symptoms) to severe cases (fever or bloody stools and > 6 stools/24 hrs). Antibiotic resistance is common with doxycycline and co-trimoxazole [not authorised]. Quinolones are most commonly used in non-pregnant adults, but azithromycin [not authorised] may be preferred for travellers to South East Asia and India due to increasing rates of resistance.



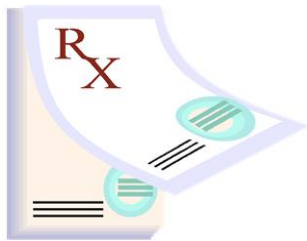
**Management of Common Infections in Primary Care** - Updated guidelines for the management of common infections in primary care have been published ([www.hpsc.ie](http://www.hpsc.ie)). The aims of the guidelines are to provide a best guess approach to the treatment of common infections, to promote the safe and effective use of antibiotics and to minimise the emergence of bacterial resistance in the community.

The guidelines which are evidence based include recommendations for the treatment of respiratory, urinary, skin and other infections commonly seen in primary and community care settings. They outline management strategies for the symptomatic relief of common infections and where indicated, recommended antibiotic choices for empiric therapy in adults and children. The guidelines are available on: <http://www.hpsc.ie/hpsc/A-Z/MicrobiologyAntimicrobialResistance/StrategyforthecontrolofAntimicrobialResistanceinIrelandSARI/Communityantibioticstewardship/File,3334,en.pdf>



### ***Dose rather than duration important for aspirin GI toxicity.***

Many guidelines recommend long-term use of aspirin for prevention of cardiovascular (CV) events among patients with CV disease or multiple risk factors. Although aspirin is known to be associated with an increased risk of major GI bleeding, there is conflicting evidence as to whether this is related to the dose or the duration of aspirin use. A recent study set out to quantify the level of GI bleeding risk with use of aspirin (*Am J Med* 2011; 124: 426-33). The study which was part of the long-term prospective US Nurses Health Study, enrolled 87,680 women with no prior history of bleeding or peptic ulcer disease, who provided data on aspirin use in 1990; follow up was at 2 yearly intervals over a 20 year period. Subjects were asked to quantify aspirin usage into regular and non-regular: regular =  $\geq 2$  X 325mg (equivalent to  $\geq 8$  X low dose) aspirin tablets per week and non-regular was usage less than that quantity. Indications for use were identified on a subsample. At the end of 20 years' follow-up, subjects were asked to report any episode of GI bleeding that had required hospitalisation or blood transfusion during the study period. These diagnoses were verified in a subsample of patients by independent gastroenterologists. Results showed 1,537 major GI bleeds during  $>1$  million person-years of use of aspirin. Cases were more likely to occur in older subjects who had a higher BMI, a higher frequency of diabetes mellitus and CV disease and who were less likely to exercise. **Regular aspirin users had a 56% higher risk of GI bleeds (especially upper GI bleeds) compared to non-regular users.** This figure was still greater (43%) when adjusted for age, concomitant disease and other risk factors. **The apparent risk was greater with increasing dose:** compared with no use, those who took  $>14$  X 325mg equivalent / week had a  $>$ two-fold increased risk of a major bleed while those who took 2-5 X 325mg equivalent /week had a 1.5 fold increase. **There was no difference in risk when comparing duration of use ( $<5$  years vs.  $>5$ years).** Although the study was unable to address the influence of enteric coating, the authors suggest that this may not be significant. They state that the findings suggest that the adverse GI effects of aspirin therapy can be minimised by using the lowest effective dose among both short-and long-term users.



### ***Strategies for Safer Prescribing*** - A document, recently published by the

UK National Prescribing Centre, reviewed strategies to help improve the safety of prescribing and other aspects of medicines management in primary care. Evidence from the UK suggests that in primary care, there is a prescribing error rate of 7.5% and that approximately 6.6% of hospital admissions are medication related, of which two thirds are preventable.

Those most at risk of medication errors are **the elderly, those with multiple serious co-morbidities, those taking potentially hazardous medications, those with acute medical problems and those who are ambivalent about medication taking or who have difficulty understanding or remembering to take**

**medication.** The drugs most commonly associated with preventable harm in general practice include those with a **narrow therapeutic index (including digoxin, methotrexate and warfarin) and other commonly used drugs including antithrombotics, cardiovascular drugs, CNS drugs, anti-diabetic drugs, NSAIDs and systemic corticosteroids.** There are four classes of drugs which are associated with approximately half of medication related hospital admissions; **antithrombotics, anticoagulants, NSAIDs and diuretics.**

The article discusses the main causes of medication errors which include: human error, not knowing enough about the patient, not knowing enough about the medicine, slips and lapses when prescribing, communication problems (with patients and between primary and secondary care), medication monitoring and repeat prescribing (key points for safe prescribing are highlighted). The article lists 'top tips' for safe prescribing and concluded that GPs "need to employ a purposeful, conscious, and analytic checking process when prescribing, communicate well and have robust medication safety systems in their practices". The full article can be viewed on: [http://www.npc.nhs.uk/evidence/resources/10\\_top\\_tips\\_for\\_gps.pdf](http://www.npc.nhs.uk/evidence/resources/10_top_tips_for_gps.pdf)