



# Therapeutics Today

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**Prevention of migraine** Migraine, which affects up to 12% of the population (females > males) may require pharmacological prevention (*BMJ 2011; 342: d583*). A high frequency of migraine, inadequate responsiveness to drugs used to treat migraine acutely, and migraine that greatly interferes with activities of daily life are accepted criteria for starting preventive treatment. Before deciding on preventive treatment, it is important to consider coexisting medical conditions and to involve the patient in the treatment plan. Shared decision making helps to

ensure that the patient understands the reasons for starting preventive treatment and is comfortable with the chosen drug, which increases compliance. The goals of migraine prevention are to reduce the frequency and severity of migraine headaches and to reduce the use of acute drugs and visits to the doctor's surgery. The pathogenesis of migraine is not completely understood and the complex mechanism of action of migraine preventive drugs is unclear.

**β blockers** such as propranolol and metoprolol have been evaluated for their efficacy in migraine prevention. A Cochrane review concluded that propranolol is effective in preventing migraine in the short term; sustained release options offer the benefits of once daily dosing and improved compliance. β blockers are a good choice for patients with coexistent hypertension, but should not be used in patients with asthma, and must be used with caution in patients with depression. **Calcium channel blockers** such as amlodipine and verapamil are effective options for some patients, however side effects such as hypotension and pedal oedema can occur. Other anti-hypertensives such as the **angiotensin-converting enzyme inhibitors** (e.g. lisinopril) and **angiotensin-II receptor antagonists** (e.g. candesartan) have also been studied as potential treatments for preventing migraine; however, because of a lack of definitive data for migraine prevention, these drugs would be considered second or third line options. **Antidepressants** have also been used for the prophylaxis of migraine. The tricyclic antidepressant (TCA) amitriptyline has been shown to be effective in several randomised controlled trials and would be considered a first line option; the dose used is lower than that used to treat depression. High level evidence to support the use of other TCAs is lacking. Patients may experience anticholinergic side-effects with TCAs. The selective serotonin reuptake inhibitors have been proved to be no more effective than placebo for preventing migraine attacks. The serotonin and noradrenaline reuptake inhibitor venlafaxine has been shown to be effective for migraine prevention. **Antiepileptic drugs** such as topiramate and valproate have also been shown to be effective for preventing migraine and are generally considered first line treatment options. Lamotrigine may be useful for patients who have migraine with aura. The evidence regarding the effectiveness of gabapentin is variable and it would not generally be considered first-line. The use of **methysergide** is limited due to concerns regarding potential development of retroperitoneal, pleural and cardiac valve fibrosis. **Botulinum toxin A** has also been used for the prevention of migraine. In addition, several vitamins, minerals and herbal remedies have been used to prevent migraine.

While polypharmacy should be avoided if possible, some patients who do not respond to single preventive drugs may require combination of drugs e.g. propranolol and amitriptyline. Patients should be followed up according to their individual needs and the decision to discontinue preventive drugs taken on a case by case basis.

[Editors note: many of the drugs used for the prophylaxis of migraine are not authorised for this indication and many should be used with caution in women of child bearing potential; the prescriber is advised to check the individual Summary of Product Characteristics on [www.medicines.ie](http://www.medicines.ie) or [www.imb.ie](http://www.imb.ie) ]



### **Update on contraception and drug interactions**

The UK Faculty of Sexual and Reproductive Healthcare has recently produced an updated guidance document on Drug Interactions with Contraception ([www.ffprhc.org.uk/](http://www.ffprhc.org.uk/)). A change from the previous drug interaction guidance document relates to information on the use of non-enzyme inducing antibiotics and combined hormonal contraception (CHC). In the past there were concerns that some antibacterials reduced the efficacy of CHC by impairing the bacterial flora responsible for recycling ethinylestradiol from the large bowel. However several sources including the World Health Organisation concluded that the evidence generally does not support this interaction. The current recommendations from the Faculty of Sexual and Reproductive Healthcare advise that no additional contraceptive precautions are required when CHC is used with antibacterials that do not induce liver enzymes, unless diarrhoea or vomiting occur. The current British National Formulary (BNF) No 61 concurs with this advice.

[Editors note: the updated recommendation, endorsed by the above expert groups, may differ from the current advice to be found in the Summary of Product Characteristics available on [www.medicines.ie](http://www.medicines.ie) or [www.imb.ie](http://www.imb.ie) ]



### **Waste not Want not!**

Expenditure on medicines is a large part of the health budget in most developed countries. It is acknowledged that many of the medicines prescribed and dispensed are ultimately discarded, resulting in a huge wastage of scarce resources. A recent UK report evaluated the scale, causes and costs of so-called "Waste Medicines". It noted that most drug wastage is not primarily the result of deliberate patient action but rather encompasses a series of circumstances such as death of a patient, treatment revision (due to disease progression, toxicity, disease improvement) as well as system problems (such as repeat prescription activities supplying medicines not needed by the patient and failure to help vulnerable patients adhere to their medicine regimens). Therefore not all prescribed medicines wastage is avoidable. The report looks at opportunities for reducing wastage and includes the following recommendations:

- Provision of targeted support for patients starting new therapies/difficult to take treatments and for vulnerable patients in the community to ensure adherence and optimal benefit from use
- Supporting quality prescribing and ensuring regular review of treatment regimens for each patient in order to remove unnecessary / no longer used medicines [especially in repeat prescription writing]
- Review of "treatment resistant" patients to ensure that they are actually adhering to the treatment regimen
- Further enhancing liaison between primary and secondary care teams at time of patient discharge from hospital

The report recommends a multidisciplinary approach, whereby all healthcare professionals would work together to improve patient adherence and to encourage patients to return all unused medicines to their pharmacist for proper disposal. Of importance, the report concludes that any campaign to reduce waste medicines should be linked with improving the overall quality of care and ultimately the health outcomes for the patients.

The full report is available on the following website:

([http://www.pharmacy.ac.uk/fileadmin/documents/News/Evaluation\\_of\\_NHS\\_Medicines\\_Waste\\_\\_web\\_publication\\_version.pdf](http://www.pharmacy.ac.uk/fileadmin/documents/News/Evaluation_of_NHS_Medicines_Waste__web_publication_version.pdf))



### **HSE response to Japanese Nuclear Event**

The NMIC has received a number of queries in relation to whether Irish people living in Japan or recently returned from Japan should consider taking iodine tablets, following the recent earthquake and resultant nuclear event. Information is available on the Health Service Executive website. Irish people living in Japan should contact the Irish Embassy in Japan and follow local advice. Further information is available on [www.hse.ie](http://www.hse.ie).