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Melatonin and jet lag

Symptoms of jet lag such as sleep disturbance and feeling tired often persist for several days after long international flights. Recently the pineal hormone melatonin has been suggested as a possible antidote to jet lag as it is claimed to speed travellers' adjustment to the day-night cycle of the new environment. This proposal was tested by Petrie *et al* (p 705) in a double blind trial on travellers flying between Auckland and London and back. Volunteers received either melatonin or placebo on one leg of the trip and the other substance on the return. Psychometric assessments of jet lag and mood were made over the 10 days after arrival. The results showed that melatonin did help people adjust more quickly to the new time zone. Those taking melatonin reported less fatigue and generally recovered their sleep and energy faster than those taking placebo.

Screening people at very high risk of HIV infection may require more than the usual tests

Infection with the human immunodeficiency virus (HIV) may be followed by a latent period before antibodies can be detected. High resolution molecular technology can identify the viral genomes when only a few copies are present, and polymerase chain reactions can selectively enrich a DNA sequence by up to a million times. On p 713 Pezzella and colleagues present the results of using these techniques in seronegative people at high risk of infection. They studied two female partners of HIV positive men, one bisexual man who had seropositive partners, and two children of seropositive mothers. All five subjects were seronegative based on results of enzyme linked immunosorbent assay (ELISA), western blot analysis, and antigen capture assay but by using *in situ* hybridisation in peripheral blood mononuclear cells and *in vitro* amplification of viral DNA by polymerase chain reactions Pezzella *et al* diagnosed HIV infection in four. In such very high risk groups it may be necessary to use these techniques when screening for HIV infection.

Pulse oximetry at the roadside

Medical and paramedical personnel concerned in the prehospital management of seriously injured road accident victims often have problems in assessing the severity of the patients' injuries. Examining people who are trapped may be difficult because of restricted access and adverse environmental conditions. Monitoring the patient in the back of a moving ambulance poses additional problems. In this setting assessing and monitoring the patency of the airway and the adequacy of ventilation may be difficult. Pulse oximetry has been used in hospital to measure tissue oxygen saturation (Sao₂) in patients at risk of hypoxia. On p 711 Silverston reports a study to see whether measuring the Sao₂ would be both feasible and valuable in the prehospital setting. A pulse oximeter was carried by a

member of an immediate care scheme and the Sao₂ measured in 25 consecutive patients with altered trauma scores. The portable oximeter proved to be of considerable value in detecting and quantifying the degree of hypoxia from airway obstruction and hypoventilation and in assessing patients with chest injuries. No practical problems were encountered with the device.

Observer variation in diagnosing cervical intraepithelial neoplasia

Cervical intraepithelial neoplasia describes a range of squamous epithelial abnormalities of the cervix uteri that are regarded as precursors of cervical cancer. Although the histopathological diagnosis of cervical intraepithelial neoplasia forms the basis for treatment of these conditions, a study by Ismail *et al* (p 707) shows that such a diagnosis is far from straightforward. Eight experienced histopathologists examining the same set of 100 colposcopic cervical biopsy specimens often disagreed with each other: agreement on the discrimination between reactive squamous proliferations and the lower grades of cervical intraepithelial neoplasia was particularly poor. As many minor cytological abnormalities are being detected by cervical screening programmes objective and reproducible criteria for diagnosis are needed. As an interim measure the authors suggest that a borderline category of cervical intraepithelial neoplasia with the clinical implications of follow up without treatment should be introduced.

Sudden infant death syndrome and postneonatal mortality in immigrants in England and Wales

Sudden infant death claims the lives of about 1500 infants each year in Britain and is the leading cause of postneonatal mortality. Although almost half the deaths in the postneonatal period are attributable to this condition, its aetiology remains largely obscure. Ethnic differences in the incidence of this condition in Britain have not previously been examined in detail. On p 716 Balarajan *et al* report their analysis of the data; this shows that during 1982-5 postneonatal mortality was highest in infants of mothers born in Pakistan (6.4/1000 live births) followed by mothers born in the Caribbean (4.5), the United Kingdom and the Republic of Ireland (4.1), India (3.9), east and west Africa (3.0), and, finally, Bangladesh (2.8). Similar gradients in mortality were found after standardisation for maternal age, parity, and social class. Mortality attributable to sudden infant death, however, was lower in infants of mothers born in Pakistan (0.9/1000) than in those of mothers born in the United Kingdom (1.7), the Republic of Ireland (1.8), and the Caribbean (1.4). These ethnic differences in the incidence of sudden infant death in Britain's immigrant communities could offer additional insights into this condition.