

*In brief***Catheters coated with antibiotics reduce infections:**

Coating catheters with antibiotics can greatly reduce a major source of infection among hospital patients. This was the finding of a study in which catheters saturated inside and outside with the antibiotics minocycline and rifampicin were compared with catheters coated on the outside only with the two antibacterial agents chlorhexidine and silver sulphadiazine (*New England Journal of Medicine* 1999;340:1-8). Only one catheter related infection occurred among the 350 patients given catheters impregnated with the antibiotics, compared with 13 infections among the 370 patients given catheters coated with the antibacterial agents.

New head for UK cancer institute:

Dr Peter Rigby has been appointed chief executive of the United Kingdom's Institute of Cancer Research. He previously worked as head of the division of eukaryotic molecular genetics at the Medical Research Council's National Institute for Medical Research, and his research team there will move with him to the institute.

Meningococcal meningitis outbreak in Sudan:

An outbreak of 126 cases of meningococcal meningitis has been reported to have occurred in the northern Darfur region of Sudan last December. This is five times higher than the number reported for the same month in 1997. Cases have continued to be reported in January, with over 20 deaths so far. The World Health Organisation is sending a team to help assess the situation.

Israel approves marijuana for severely ill patients:

"Compassionate use" of marijuana for a small number of severely ill patients is due to be approved by Israel's health ministry, after recommendations from a parliamentary committee. The committee urged the ministry to set up a forum of experts to make exceptions to the criminal law that bars the sale and use of any amount of cannabis.

WHO budget set to reflect new priorities

Phyllida Brown, *London*

The director general of the World Health Organisation, Gro Harlem Brundtland, will next week ask the organisation's governing body to approve radically overhauled spending plans reflecting her programme of reforms.

The WHO's executive board, which meets from 25 January in Geneva, will be presented with budget proposals for the years 2000-1 that require an increase of nearly one fifth in voluntary contributions by donors—that is, an increase in the amount paid over and above membership dues.

Dr Brundtland believes that the reforms already under way within the organisation will attract further support from member states.

The proposed budget of \$1.8bn for the next two years allocates \$19m in extra funds to Africa and a smaller amount to the former Soviet republics. There is an overall shift in resources from headquarters



Dr Gro Harlem Brundtland has called for a shift of WHO resources

and the six regional offices to activities at country level.

At headquarters, spending on communicable diseases continues to account for the biggest share of funds, at \$284 000, an increase of 37% on the last budget. But two much smaller areas of the WHO's work will attract the biggest increases in spending: non-communicable diseases, which doubles its budget to \$14 000, and data analysing activities known as evidence and information for policy, whose budget climbs by 44% to \$48 000. Three new, high profile initiatives to be spearheaded by

Dr Brundtland—tobacco control, malaria control, and health sector development—will each receive extra resources. Managerial and administrative costs have been cut.

The new budget is intended to be more transparent, reflecting the new structure of the WHO. Previously, member states found it almost impossible to work out how their money was being spent because the categories in the budget did not reflect the organisation's structure. Now, 52 disparate programmes have been turned into nine clusters, and these are linked to the budget. □

Ritalin may influence serotonin balance in hyperactive children

Abi Berger, *BMJ*

American scientists have discovered how methylphenidate (Ritalin), which is often given to calm children with attention deficit hyperactivity disorder (ADHD), works in an animal model of the condition. Their work may solve the riddle of why psychostimulants are useful in treating ADHD.

Methylphenidate is often prescribed to children who engage in hyperactive behaviour as part of ADHD. The drug seems to reduce hyperactivity in these children and improve their cognitive performance, but there has been little knowledge about its mode of action.

A research team from Duke University in North Carolina has found that the hyperactivity symptoms of ADHD are probably caused by children having too little serotonin in addition

to high concentrations of dopamine. Drugs such as methylphenidate work by restoring the balance between serotonin and dopamine in the brain (*Science* 1999;283:397-401). "Since we know that the symptoms of ADHD mostly resolve in adolescents, this may be because the neurotransmitter system matures, resulting in a better balance between serotonin and dopamine," suggested Marc Caron, a member of the research team.

The findings have come from research on a genetically modified mouse in which the dopamine transporter gene was eliminated, leading to high concentrations of extracellular dopamine. These mice have been found to behave in much the same way as hyperactive children. "They were hyper, impulsive, and

had an inattentive manner," reported Dr Caron.

Dr Caron and his colleagues administered methylphenidate and amphetamines to normal mice and to the genetically modified mice. The normal mice became agitated and showed an increase in dopamine concentrations, but the modified mice calmed down, and there was no change in their extracellular dopamine concentrations.

These observations led Dr Caron to deduce that methylphenidate does not act directly on the dopamine system. The team used a compound which directly blocks the noradrenaline transporter protein and found that this compound had no effect on the hyperactive mice. Fluoxetine (Prozac), a selective serotonin reuptake inhibitor, seemed to mimic the action of methylphenidate in the modified mice. The researchers confirmed that the serotonin system was implicated by administering a direct serotonin receptor agonist that mimicked methylphenidate. □