

## Revaccination of adults against diphtheria

In Britain a primary course of adsorbed diphtheria vaccine is recommended for children during the first year of life with a booster dose at around 5 years.<sup>1</sup> Diphtheria vaccine is usually given combined with tetanus and pertussis vaccine (DTPe/Vac/Ads), the 0.5 ml standard dose of which contains 24 LfU (flocculating units) of diphtheria toxoid. Diphtheria (and asymptomatic carriage of *Corynebacterium diphtheriae*) have become rare, though the occasional case and isolate are reported—usually in circumstances suggesting that the infection was acquired abroad.<sup>2</sup> Evidence from both serological studies of antitoxin concentrations and Schick skin testing suggests, however, that immunity wanes after childhood immunisations<sup>3,4</sup> leaving people vulnerable once again if exposure were to occur (p 524).

National policies vary whether to give booster doses of vaccine to adults.<sup>5,6</sup> Among the considerations are the number of people travelling between the country concerned and endemic areas and the safety and logistics of administering the vaccine.

When diphtheria vaccine is given to adults whose blood contains antitoxin they may suffer severe reactions. This problem is largely overcome when a low dose (1.5 LfU) preparation of vaccine is used.<sup>7</sup> The low dosage of toxin boosts antitoxin concentrations effectively—but only in those who have previously received a full primary course of vaccine.<sup>7,8</sup> For primary protection the higher dose (24 LfU) should still be used. Clearly, therefore, Schick or antitoxin

tests should be performed before immunisation in adults who are uncertain whether they received a full primary course.

In Britain diphtheria is now a rare, usually imported infection, and there seems little point in routinely re-immunising adults. Now that a low dose vaccine is available (manufactured by the Swiss Serum and Vaccine Institute, Berne, and distributed by Regent Laboratories Ltd in Britain), however, reimmunisation has become a simpler and safer procedure for those adults likely to be exposed as travellers to endemic regions and for some groups of health workers and laboratory staff.

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## Avoidable disability

Some 4 million people in developing countries each year are disabled by infection with the guinea worm, *Dracunculus medinensis*. Yet this parasite could be totally eliminated by replacing "step in" wells with "draw" wells at a mere £230 each—or even more simply by filtering drinking water. Another avoidable cause of disability is the mycetoma that afflicts, for example, refugee camps in Africa and elsewhere and causes 40 000 amputations a year. Furthermore, millions of physically handicapped people who are crawling round the slums of the developing world could have their lives transformed by a calliper.

Against such a background the International Initiative Against Avoidable Disablement (IMPACT) was inaugurated in 1983 under the aegis of the United Nations Development Programme, the World Health Organisation, and Unicef, and programmes exist or are about to start in southern and South East Asia, Africa, and Latin America. There are national IMPACT foundations in India, Britain, and the United States—for developed countries have their own burden of unnecessary disability. The British foundation has been holding workshops on disabilities of movement, vision, and hearing, and on mental handicap, culminating in a recent seminar, held at the Royal Society and chaired by Sir Patrick Nairne, to make recommendations.

Refreshingly and realistically the seminar put least emphasis on the usual themes of more research and more

resources. The main thrust was towards possibilities of action based on existing knowledge and existing technology, largely within present resources or health programmes. Ample scope exists both for preventing primary conditions or their worst effects and for curing or alleviating disabilities that result from various impairments; but clearly delay reduces the impact of such measures. Undetected deafness impedes a child's development; missed scoliosis in a young child may mean unnecessarily progressive deformity needing surgery; a lengthy wait for a hip replacement is a squandering of precious years for an old person. On the other hand, indiscriminate screening and unfocused health education campaigns are neither realistic nor cost effective, so guidelines and strategies are needed for a more precise targeting. Delays in treatment may often be reduced by mere changes in organisation (the million or so cataract operations performed in India in the past year in special camps are not perhaps a model for us but are a reminder of what can be achieved by innovative organisation).

The many recommendations for realistic action put forward by the seminar (a report of which is to be published shortly) depend much on improved delivery of services and public awareness or acceptance and on reordering resources and priorities. Some recommendations, however, do imply more resources—in particular, genetic research, effective application of existing screening techniques and diagnostic tools,