

or radio (162) and newspapers (119) we believe that these are important vehicles for increasing public awareness of this disease.

In the light of our findings we suggest that future publicity should emphasise that meningitis is not a threat only to babies and young children and that teenagers and elderly people are also particularly at risk. The importance of a petechial or purpuric rash that does not fade when pressure is applied and the need for immediate action when such a rash is found should also be highlighted.

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- 1 Jones J. Anti-meningitis curfew urged. *Observer* 1996 Jan 14:3.
2 Thomson AP, Hayhurst GK. Press publicity in meningococcal disease. *Arch Dis Child* 1993;69:166-9.

Neonatal screening in New Zealand

EDITOR,—Alison Streetly and colleagues describe the neonatal screening programmes in the United Kingdom.¹ Screening for phenylketonuria and congenital hypothyroidism is almost universal, but other conditions have been added to meet regional needs (or regional skills and interests). The authors comment that not all programmes have been assessed against the criteria that determine whether a screening programme is suitable.²

In New Zealand seven conditions are screened for (table 1), with roughly 95% coverage of about 60 000 births annually. Some of the tests may not meet the commonly cited criteria for a screening test; many people involved in neonatal screening acknowledge, however, that it may not be necessary to meet all the criteria—that the criteria should be considered and that a rational decision to screen can be made if not all the criteria are met. It has also been suggested that the criteria, now 27 years old, should be reconsidered and, for instance, that the requirement for a “treatment to be available” should be replaced by “scope for action to be available.”

Recommendations for neonatal screening tests for New Zealand and Australia are made by a joint subcommittee of the Human Genetics Society of Australasia and the Australian College of Paediatrics. The subcommittee recommends unequivocally screening for phenylketonuria and congenital hypothyroidism and also recommends screening for cystic fibrosis, galactosaemia, and congenital adrenal hyperplasia.

The additional screening tests in New Zealand are justified on the basis of our scattered population and the fact that standards of diagnosis of metabolic disease in sick children differ in different parts of the country. In the four cases of maple syrup urine disease diagnosed most recently by the screening programme no metabolic tests had been requested on the infants before the likely diagnosis was reported by the screening programme, although all

the infants had symptoms suggestive of metabolic disease. The marginal cost of adding screening for biotinidase deficiency and maple syrup urine disease to screening for the five other conditions is less than \$NZ1 (43p) per infant screened.

The efficacy of screening is constantly reviewed, and screening for homocystinuria was stopped in 1986. This was because the decrease in the use of cows' milk as infant food plus the fact that the screening test was being done increasingly early meant that the protein intake of infants with homocystinuria was insufficient to result in pathological values of methionine at the time the sample is taken.

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- 1 Streetly A, Grant C, Pollitt RJ, Addison GM. Survey of scope of neonatal screening in the United Kingdom. *BMJ* 1995;311:726. (16 September.)
2 Wilson JMG, Junger YG. *Principles and practice of screening for disease*. Geneva: World Health Organisation, 1968. (Public health paper No 34.)

Breast feeding should be promoted as a public health measure

EDITOR,—C Worth and Howard Barnes draw attention to the serious public health implications of the water shortage in West Yorkshire and the proposal that 24 hour cuts in the water supply might be made on a “one day on, one day off” basis.¹ A topic not specifically mentioned is the particular difficulties that interruptions in the water supply pose for mothers who feed their babies with artificial milks. Worth and Barnes note the increased general risk of gastrointestinal infection that would result from any interruptions in the water supply. Inevitably, the risk of severe disease will be particularly high among artificially fed babies.²

One immediate measure to reduce the numbers susceptible would be vigorously to promote breast feeding in hospitals and the community. Breast feeding is of proved benefit in protecting infants against gastrointestinal infection even when the water supply is constant and safe.² If the water supply was interrupted mothers who were breast feeding would be saved one major concern over their babies' health when other, practical concerns would be paramount. The most recent national data indicate that the north of England has a low and declining rate of breast feeding: in 1990 only 50–60% of mothers started breast feeding, and by 6 weeks of age the proportion continuing was under a third.³ Breast feeding is often successfully promoted in the developing world.⁴ Preliminary data from the World Health Organisation and Unicef's “baby friendly initiative” indicate that breast feeding rates can also be increased in Britain by local professional initiatives. In Sheffield the Jessop Hospital for Women has adopted both the recommendations made in the baby friendly initiative and the Department of Health's guidance on promoting breast feeding and has increased its breast feeding rates accordingly (S Ashmore, personal communication).

Such an intervention would be a simple public health measure that, even if further interruptions in the water supply did not occur, would result in health gains. For example, it has been estimated that costs to the health services in England and Wales would be reduced by about £0.5m a year (mostly through the prevention of gastrointestinal

infections) for every percentage point increase in breast feeding rates.⁵

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- 1 Worth C, Barnes H. Water shortage in West Yorkshire has serious health implications. *BMJ* 1995;311:1504. (2 December.)
2 Standing Committee on Nutrition of the British Paediatric Association. Is breast feeding beneficial in the UK? *Arch Dis Child* 1994;71:376-80.
3 White A, Freeth S, O'Brien M. *Infant feeding 1990*. London: Office of Population Censuses and Surveys, 1992.
4 Nicoll A, Newell M-L, Van Praag E, Van de Perre P, Peckham C. Infant feeding policy and practice in the presence of HIV-1 infection. *AIDS* 1995;9:107-19.
5 Department of Health in consultation with the National Breast Feeding Working Group. *Breast feeding: good practice guidance*. London: Department of Health, 1995.

Treatment of toenail tinea infection

True cure seems unlikely

EDITOR,—In the report of their study comparing terbinafine and itraconazole in toenail tinea infection M Bräutigam and colleagues state that “because the disappearance of the hyphae from the nail plate took more time than fungal viability, the mycological cure rate increased more slowly.”¹ As the authors point out, this probably reflects the incorporation of the drug into the nail and the resultant inhibitory effects. Thus the persistence of hyphae long after the results of cultures became negative may reflect only the time taken by the nail with the incorporated antifungal to reach the terminal nail plate, which is sampled for culture and microscopy. Given that only 49% of the group given terbinafine and 36% of the group given itraconazole showed clinical cure at one year (authors' table I), it would be interesting to see the results of follow up at two years. Additionally, true cure seems unlikely, given that the length of unaffected nail reached a plateau at 8 mm. If a true cure had been attained the progression would have continued until all of the nail was unaffected.

The true cure rate of onychomycosis has been low when studied beyond the period of the drug's direct action. Despite adverse effects being common (occurring in about 40% of cases) it may be worth treating the condition with oral antifungals, but only if they are truly curative. But if the benefit is only temporary, as some authors suggest,^{2,3} then perhaps future studies should incorporate in their outcome measures patients' subjective assessment of their symptoms. This would help determine whether the short term benefits outweigh the adverse effects.

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- 1 Bräutigam M, Nolting S, Schopf RE, Weidinger G for the Seventh Lamisil German Onychomycosis Study Group. Randomised double blind comparison of terbinafine and itraconazole for treatment of toenail tinea infection. *BMJ* 1995;311:919-22. (7 October.)
2 Forck G. Relationship between the blood circulation of the skin and the development of fungus disease. *Zentralblatt für Bakteriologie, Parasitenkunde, Infektionskrankheiten und Hygiene* 1970;212:544-53.
3 Buck DS, Nidorf DM, Addino JG. Comparison of two topical preparations for the treatment of onychomycosis: *Melaleuca alternifolia* (tea tree) oil and clotrimazole. *J Fam Pract* 1994;38:601-5.

Authors' reply

EDITOR,—David S Buck suggests that in some patients one year may be too short for a final assessment of therapeutic efficacy in toenail tinea infection. We agree that our figure and the

Table 1—Diseases screened for in New Zealand neonatal screening programme and their incidence

Condition	Incidence
Cystic fibrosis	1 in 3 900
Congenital hypothyroidism	1 in 5 300
Phenylketonuria	1 in 20 100
Congenital adrenal hyperplasia	1 in 21 800
Biotinidase deficiency	1 in 58 800
Galactosaemia	1 in 123 400
Maple syrup urine disease	1 in 168 100