

due to at least two factors: the neurotoxic potency of lead and the fact that, in this sample, lead is not correlated with other variates that affect IQ. This sample was selected because the children were offspring of white working-class parents, and thus some of the problems of confounding in studies that sample from inner-city populations were avoided. In that regard, the sample reported here is probably more representative of the majority of children in this country.

These results, combined with recent reports from England and Germany (3), support the assertion that doses of lead lower than those that are clearly symptomatic are neurotoxic. These data may have relevance to the current regulatory and legislative initiatives directed at the control of airborne lead.

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References

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2. L. Grant *et al.*, "Draft air lead criteria document" (Environmental Protection Agency, Washington, D.C., 14 November 1983), appendix 12-C.
3. R. Lansdown *et al.*, in *Lead versus Health*, M. Rutter and R. Jones, Eds. (Wiley, New York, 1983); G. Winneke *et al.*, *Int. Arch. Occup. Health* **51**, 231 (1983).

NIH Study

The Delegation for Basic Biomedical Research takes note of the report of the Institute of Medicine's Committee for the Study of the Organizational Structure of the National Institutes of Health (NIH) (News and Comment, 30 Nov., p. 1055). The document is an adequately thorough analysis of NIH's structure and operating mode and makes recommendations on such matters as recommending the authority and flexibility of the office of NIH's director; controlling the proliferation of institutes; the desirability of setting up a Health Sciences Board to advise the Assistant Secretary for Health on proposals that would alter the structure of NIH; and problems of overlapping jurisdictions between federal health agencies.

We heartily endorse the proposal concerning the director's office. Proliferation of institutes clearly tends to dilute the NIH mission. We agree that the process should be slowed but are aware that the problem is fraught with difficulties. The Health Sciences Board concept

has some merit, which, however, is compromised by the danger of its becoming politicized and so another unneeded bureaucratic accretion.

But we have the sense of "here we go again." Every few years we take the federal government's brightest jewel out of its velvet bag and ponderously examine it for flaws! Each time we express our delight at its loveliness, note a few minor blemishes, and return it reverently to the safe. This most recent study of NIH brings little new to light. The NIH remains a brilliant exception to the widely held view that big government is wasteful government. The NIH is a superb federal agency that has borne America to its present position of international leadership in biomedical science. What operational difficulties it is experiencing today are almost entirely attributable to inadequate funding. Indeed, a study of NIH's present situation may be likened to examining the victim of a strangulation in progress. Evaluation of the victim's performance capabilities are bound to be compromised by steadily mounting asphyxiation. Removal of the noose and introduction of fresh air are essential before a clear picture of the subject's condition can be ascertained.

The fundamental truth of NIH is that it has been operating under steadily rising budgetary stringencies for some 14 years. Careful assessment of its needs relative to obligations shows that it currently requires an additional \$2.5 billion to bring it into optimum function. Money, then, and some sensible attention to protecting it against continuing legislative efforts to dilute its mission, are the two simple needs for NIH, an agency that has proved itself to be remarkably cost effective in the service of the protection of our people's health.

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Vaccines Against Parasitic Diseases

In her article "The search for a malaria vaccine" (Research News, 9 Nov., p. 680), Gina Kolata states, "A malaria vaccine, when it comes, will be a first. There has never been a vaccine against a parasitic disease." This statement is incorrect.

Babesiosis affects more than 1 billion cattle, sheep, pigs, goats, horses, dogs, and cats worldwide and is similar in many respects to malaria. Bovine babe-

siosis has been effectively controlled in Australia and in many other countries since the turn of the century by a live, attenuated vaccine. Between 1.5 and 2 million doses are distributed in Australia each year and, as a consequence, outbreaks of this usually fatal disease have declined to very low levels. This vaccine is injected only once to confer life-long protection.

In the United States, a dead vaccine, Anaplaz, has been widely used for about 20 years to combat anaplasmosis in cattle. This disease, like babesiosis, is haemotropic, being transmitted by a tick vector.

In Israel and India, a tissue-cultured vaccine against another tick-transmitted haemoprotezoan cattle disease, *Theileria annulata*, has been in wide use for the last 20 years.

A successful vaccine is also widely used in Europe against the lungworms of cattle and sheep, *Dictyocaulus* spp. Like the preceding vaccines, it is highly effective and has been in widespread use for about 20 years.

Work on experimental parasite vaccines has resulted in the isolation of a series of highly defined antigens from *Babesia bovis* that confer a high degree of cross-protection against a range of virulent heterologous *B. bovis* strains. Such vaccines are likely to be much more effective than the hoped-for malarial vaccines, for their use appears to have no geographical limitations. Similar advances are also being made with vaccines against *Theileria* species, helminths, cestodes, and arthropod parasitic diseases of cattle and sheep.

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Erratum: In the report "Complete development of hepatic stages of *Plasmodium falciparum* in vitro" by D. Mazier *et al.* (25 Jan., p. 440), the name of Professor M. Gentilini was mistakenly omitted from the list of authors.

Erratum: In the letter from Deam H. Ferris (11 Jan., p. 118), the last sentence of the second paragraph should have read, "The trypanosome spread by the tsetse fly cannot be distinguished morphologically, physiologically, and according to isoenzymatic tests from American stocks carried by tabanids; the disease is the same."

Erratum: In the report "Peroxisomal defects in neonatal-onset and X-linked adrenoleukodystrophies" by S. Goldfischer *et al.* (4 Jan., p. 67), the first sentence of the abstract should have read: "Accumulation of very long chain fatty acids in X-linked and neonatal forms of adrenoleukodystrophy (ALD) appears to be a consequence of deficient oxidation of very long chain fatty acids, a function that has been attributed to peroxisomes."