

this new evidence, which is reported in the March-April edition of *Transfusion*, a committee of the National Research Council, Washington, DC, has recommended that the use of whole pooled serum "be discouraged or even discontinued".

That the Americans use pooled serum at all is highly surprising because as far back as 1954 Murray *et al.* (*J. Amer. Med. Assoc.*, **154**, 1072) showed that storage at room temperature did not prevent the occurrence of hepatitis in three out of five volunteers. The danger of using pooled serum was further emphasized in 1955 when Murray (*Bull. NY Acad. Med.*, **31**, 341) showed that injection of as little as  $10^{-6}$  ml. of known infected plasma was capable of inducing an attack of hepatitis. Obviously the more donors the plasma is derived from, the greater the chance that one of them has hepatitis or is a carrier.

According to Dr W. D. A. Maycock of the Blood Products Laboratory, the American method has never been adopted in Britain because of the recognized disadvantages. Instead, small pooled sera obtained from the blood of not more than ten donors are used. The results of a survey in 1954 showed that hepatitis following transfusion occurred in one or two individuals per thousand and the method is therefore fairly safe.

The virus can be killed by exposure to ultraviolet light, but unfortunately in practice it is difficult to sterilize the plasma without damaging the plasma proteins and the method is therefore of doubtful use. A survey carried out by the Medical Research Council in 1954 showed that four per cent of patients transfused with irradiated plasma contracted hepatitis. Hartman *et al.* have shown (*Amer. J. Clin. Path.*, **24**, 339) that  $\beta$ -propiolactone can be used to enhance the effect of irradiation, but the conditions of treatment seem fairly critical.

Hepatitis can also be transmitted by using imperfectly sterilized syringes or needles. This is especially evident among drug addicts who use communal needles, as shown by H. B. Dull in 1961 (*J. Amer. Med. Assoc.*, **176**, 413).

## Oxygen

A HYPERBARIC oxygen bed has now been in use at the Westminster Hospital for 18 months for the treatment of acute myocardial infarction. There was some quiet crowing at Vickers last week when the impressive results with a small series of patients were announced. Thirty-seven of the forty serious cases of acute myocardial infarction survived. Post-mortem examination showed that two of the three deaths were caused by thrombosis of both main coronary vessels, which precluded survival. The cases were further analysed to show that of twelve patients with cardiogenic shock, ten survived. Pulmonary oedema was reversed in all of fourteen cases and, in thirty-six patients, atrial or ventricular arrhythmias or conduction defects were reverted to normal, except for one case of complete heart block.

At present, the mortality rate among people admitted to hospital with acute myocardial infarction is 30 per cent. The doctors at Westminster suggest that, as well as a 10 per cent reduction in this figure with intensive-care units, a further 10 per cent reduction can be achieved if hyperbaric oxygen therapy is used. High pressure oxygen treatment has been used by

other doctors with less dramatic results. Dr A. J. V. Cameron and his group in Glasgow have treated patients in pressurized rooms, with pressurized oxygen given by mask. This method has had little success and there is scepticism as to just what future there is for hyperbaric oxygen treatment in heart disease. A full series of clinical trials will be necessary if the effectiveness of the Vickers bed is to be demonstrated convincingly, and proposals have been submitted to the Ministry of Health.

The Vickers bed is an individual chamber looking rather like the cockpit of a racing car. Patients can sit or lie inside while oxygen is supplied to them at pressures of up to two atmospheres. The advantage is that in such individual compartments the patient is completely surrounded by oxygen and a mask is not required. At the hospital, patients are in the bed for up to two hours at a stretch, during which time the two most obvious symptoms of heart trouble, pains in the chest and difficulty in breathing, are relieved. Treatment of this kind is essentially of a first aid nature, providing oxygen to the tissues to maintain them in good condition until normal respiration is restored. After a heart attack the body tends to recover by itself, so the effects due to the hyperbaric oxygen treatment alone are hard to assess. Clinical trials with controls would be helpful, but in this case it would be hard to deny the treatment to a specific number of patients if, with the treatment, they would have a good chance of survival.

## Fish take to the Air

AN air-lift of about 150,000 live fish from Lake Tanganyika to Lake Kariba, 700 miles away, has recently taken place. The project was organized for the Food and Agriculture Organization as part of a United Nations Special Fund project for boosting fisheries in the Kariba area. Lake Kariba is naturally stocked with fish, but it was decided that stocking it with outside species might improve its fishery potential.

A clupeid fish native to Lake Tanganyika, *Limnothrissa miodon*, was chosen. It is a plankton-eating species, is very prolific and sells well in Tanganyika.

The operation of transporting the fish fry in water-filled containers began in July 1967. The organizer, Hubert Matthes, estimates that 60 per cent of the fry survived. A further 100,000 fry have been transferred by the Zambian Game and Fisheries Department. Sightings of schools of the small silvery fish have been reported by local fishermen, but Matthes has said that it is too early yet to tell whether the introduction to Lake Kariba was successful.

## Back from Aldabra

THE third phase of the Royal Society expedition to Aldabra is now complete, and those concerned have left the island. Their spell of duty, since last December, spanned the wet season. Their work will be continued by a fourth party of scientists which has just sailed from Mombasa.

The returning party has nothing spectacular to report. The study of insects, birds and giant tortoises has been continued. One innovation has been the investigation of fresh water pools by Dr K. G. McKenzie, leader of the expedition since he joined it in January.

The expedition has also, during the phase now ended, included botanists for the first time, some with a particular interest in the mangrove swamps on Aldabra. All this will no doubt help to clarify the negotiations now under way between the Royal Society, the Smithsonian Institution and various governments on the establishment of a permanent research station on the island.

## Studying for War

BRITAIN is one of the few western countries that does not possess an independent institution for the study of national defence problems. The Royal United Services Institution last week launched an appeal for funds which will enable it to fulfil this role. Because it is autonomous, RUSI should be able to give advice to Government and industry that is independent of political and service pressures. It could also help to educate the public in the complex issues of military policy. Hitherto RUSI has been restricted to providing a library and lecture system for its members, most of whom belong to the armed services, and to publishing a quarterly journal. Under its new director-general, Air Vice-Marshal S. W. B. Menaul, the institution hopes to extend its activities to a systematic study of Britain's defence problems extending beyond the purely military issues to include the industrial, economic and financial bases of defence policy. Defence and overseas policy in the 1970s, nuclear disarmament, relations between the armed forces and industry, the economic effect of the defence system, the burden of defence expenditure on foreign exchange and the application of management techniques to the services will all come under discussion.

Industries holding military contracts have a substantial interest in such studies, and the institution expects that their representatives as well as academic students of military affairs will participate in its work. Such industries will, it is hoped, be the main source of the funds for which the institution is appealing. The target is an annual income of £70,000, of which the Government will provide £2 for every £5 contributed publicly. This proportion of Government support will guarantee the institution's independence. There may be opportunities for collaboration between RUSI and the Institute for Strategic Studies but, with their spheres of interest in British and in international affairs respectively, there is likely to be little duplication of effort.

## Science Research Council Members

THE Science Research Council has four new members. The appointment of Professor Fred Hoyle, Professor J. C. Gunn, Dr E. Eastwood and Professor H. Ford brings the membership of the council to sixteen. Three members of the council have retired at the end of their terms of office; they are Dr A. Caress, Dr S. C. Curran and Professor C. F. Powell.

None of the new members is a newcomer to the SRC; all have held office or been members of the specialist groups which help to determine its policy. Professor Hoyle, for example, is a member of two such committees and chairman of one of them—the Astronomy Grants and Policy Committee. He is director of the Institute of Theoretical Astronomy at the University of Cambridge. Professor Gunn is Cargill Professor of

Natural Philosophy of the University of Glasgow; Dr Eastwood is an industrialist, director of research for the English Electric Group since 1962. Professor Ford is Professor of Applied Mechanics at Imperial College, London, and head of the department of mechanical engineering.

It would be rash to expect these new appointments to have an immediate and significant effect on the policies of the council. Each of the four new members has already had opportunities for making contributions to the policy of the SRC through the advisory committees. Chemists may be disappointed that their lobby on the SRC has not gained in strength. Biologists may be even more disappointed.

## Parliament in Britain

from our Parliamentary Correspondent

### Pension Schemes

MR JEREMY BRAY, for the Ministry of Technology, gave an assurance that when the astrophysics staff at Culham Laboratory transfers to the Science Research Council there will be no difficulty about pensions. It was the intention, he said, that these people would remain on AEA conditions, and be retained in the AEA pensions scheme. Legislation would be needed for the purpose, but Mr Bray could not say what form it would take. (Oral answer, April 8.)

### Seaton Carew Power Station

A SHORT adjournment debate on the subject of the proposed power station at Seaton Carew in County Durham gave a number of members an opportunity to express displeasure that the Government had not yet announced whether the station will be coal fired or nuclear fired. Mr Robert Woof, the member for Blaydon, quoted remarks attributed to Mr Peter Williamson, the Central Electricity Generating Board's planning officer. He said that Mr Williamson had said that the board had no intention of building a coal fired station, and that if it was prevented from building a nuclear station in the north-east, it would build one in the north-west. Mr Woof said that a coal fired station would be cheaper to build, and it was by no means clear that it would not also be cheaper to run, if the costs to the whole community were taken into account. He called for an independent inquiry to establish which form was cheaper. Mr Emmanuel Shinwell agreed.

Mr Eric Lubbock put in a good word for nuclear stations, and in particular for the high temperature reactor. This would be far cheaper than any nuclear station now contemplated, he said, and urged careful consideration of the bid put in by the Nuclear Power Group and based on a high temperature reactor. The tenders, he said, should be published, so that everybody could make up their own minds.

Mr Reginald Freeson, Parliamentary Secretary to the Minister of Power, could make no promises. He hoped a decision would be made soon, but doubted that another enquiry into nuclear power costs would serve a useful purpose. The remarks attributed to Mr Williamson would not prejudice the decision, he said, nor the study which was in progress in the Ministry of Power. The study covered a number of issues, including the load forecasts. He promised that when a decision had been taken, the minister would make a full statement about it.