

are being sent to government and other scientific agencies in Britain, the United States and elsewhere.

Regarding the provision of a limited number of these computers by the University Grants Committee during the next quinquennium in Great Britain, *Nature* observes that it would be a great pity if the number is unrealistically small. For, electronic computers have entirely changed the kind of problem (such as the structure of vitamin B<sub>12</sub> or a single protein molecule) which can be attacked successfully. As things are now, certain calculations have to

be sent from Britain to the United States, since they cannot be dealt with adequately in British Universities. One American firm alone expects to have nearly two thousand large computers in use at the end of another eighteen months or so. A similar situation is present in our country also, and some research workers, particularly in the field of crystallography, have to send their more extensive calculations to the United States for being worked out. It is imperative that a start should soon be made towards establishing a computational centre in India.

### TREATMENT OF INFECTIOUS HEPATITIS

IT is only fifteen years since the exact pathology of epidemic jaundice was determined and the idea of "catarrhal jaundice" gave way to that of "infectious hepatitis". In the absence of any specific remedy against the virus of infectious hepatitis, the application of recent knowledge of the liver's nutritional needs underlies the treatment of the disease. The earlier starvation diet is not altogether agreed upon. Whether protein should be given in excess or in only normal amount, whether fat should be restricted, whether exercise is bad for the liver—these are some of the questions which the physician may ask, and it is not possible to answer them at all dogmatically.

The value of a liberal diet, especially one containing much protein, is in keeping with observations made in Britain. But the benefit from a diet high in protein, when compared with that from a diet containing moderate or even small amounts of protein, is not remarkable, for it must be remembered that the experiments have always been carried out on adequately nourished patients, well able to stand up to what, in most instances, is a mild illness. Liberal feeding in hepatitis is not specific in the way that antibiotics are specific for many bacterial infections. It is known that protein, and in particular the amino acids, methionine and choline, are necessary for the health of the liver. The aim of liberal feeding is to ensure that the materials for repair are present in abundance.

There is no evidence that fat is harmful, and if the patient can manage it a balanced diet

containing a normal amount of fat is probably best.

The findings of Chalmers *et al.* that early activity had no harmful effect on the course of the disease is contrary to the usual teaching. But here, again, the patients studied were healthy and well fed before they fell ill. They were admitted to hospital, and, though they were not kept in bed, their activities were restricted. The problem is very different when the patient is a housewife with a house and young family to care for single-handed. The amount of work she must undertake is considerable, and it is in such circumstances that infectious hepatitis is likely to be prolonged and serious relapses may occur. Rest in bed should then be continued until the level of serum bilirubin has returned to normal.

In addition to a liberal diet many other substances, including amino acids, hormones and vitamins, have been tried in an endeavour to hasten recovery. Methionine and choline, amino acids containing sulphur, have no demonstrable effect. Insulin has been given in combination with a diet high in carbohydrate, but it is probably wiser to give carbohydrate alone.

On the whole it would appear that the average patient will do well on a commonsense regimen of rest with as liberal a diet as he can take. But when the illness is severe something more is needed; the most useful additions are large quantities of carbohydrate and vitamins of the B group—(*British Medical Journal*, Feb. 18, 1956, p. 389.)