

Human Milk Banks

(Reprinted from "British Information Services.")

NOVEL METHOD OF FIGHTING INFANT MORTALITY.

The human milk bureau at Queen Charlotte's Hospital in London, celebrates its 10th anniversary this year. It has proved so successful in the fight against infant mortality that other cities are now beginning to adopt this method. Recently a similar institution was founded at Cardiff.

This highly beneficent institution has been described as a human milk bank, which explains its connection with the blood banks. The services of blood donors which saved so many lives during World War II could be used on a wide scale only when means were found of transfusing blood, not only directly from donor to recipient, but indirectly to patients who needed blood to recover from an operation, an injury or an illness. Preserving blood, storing it in banks and despatching it over great distances solved the urgent wartime problem of supplying blood without delay to patients in need of it, wherever they were.

Collection Service :

Britain's human milk banks act as intermediary between mothers and infants, just as blood banks do between donors and recipients. There were indeed milk donors long before there were blood donors ; but now the milk banks have made the donors and the infants, who are the recipients, independent of each other. Mothers who will donate milk for unknown and, perhaps, unborn children, do not have to leave their home to do so, for the milk bank runs a collection service. The milk is brought to the bureau and tested for taste and infectious germs ; if it passes the tests, it is then pasteurised, cooled and bottled. It can be kept for many weeks, either liquid or in a dried state, as small cakes which can be turned into milk again by the addition of water.

Thus prepared, the milk can be sent wherever it is needed to save infants who are either born prematurely, who are weak or who are otherwise in need of nourishment. Normally it is sent by road or rail, but in urgent cases it goes by air.

No Milk Groups :

There is no proper substitute for human milk. Britain's milk banks provide aid in cases where formerly it would have been impossible or too late to help the necessitous child.

In appearance the human milk bureau at Queen Charlotte's Hospital resembles a laboratory, a cold store and a dairy. Most of the milk stored there has been donated by mothers who brought their children into the world at the Hospital's Clinic. The bureau gives them a small sum of money for every milk donation. Human beings are not divided into milk groups as they are for blood ; healthy human milk can be fed to any infant. But before storage, the milk is tested for nutritive value in addition to germs and taste.

Fruitful Experience :

The London human milk bureau began to operate in 1938 as an experiment, and the experiment succeeded. Long experience has developed the most suitable methods of testing, pasteurising and preserving the milk. The time has now come when this experience can be used on a large scale, not only in Britain but also overseas in those countries interested in the London milk service.

General, this bureau has served only certain Western districts of London. The new milk bank at Cardiff, which the municipal authorities have installed on the London pattern, will despatch human milk over long distances.

Other cities and towns in Britain are expected to follow this example shortly, and every new milk bank opened will be a further step to combat the infant mortality rate.

Paul West

Chemotherapy

(Reprinted from the "Nursing Mirror".)

The Sulphonamides :

The sulphonamides were developed from the discovery of a German chemist, between the two wars, that a red dye—prontosil rubrum—was harmful to bacteria. More important, that its action, when given systematically to an infected animal, was greater than in test-tubes, and it was a selective action, since it did not harm the tissues. Thus, its qualities approached those of the ideal antiseptics mentioned in our last article, with this difference. Whereas ordinary antiseptics are most efficient in the laboratory and are hampered by the presence of living tissue, the combination of sulphonamides and tissues is more effective than either alone. Thus, the sulphonamides cannot be antiseptics in the ordinary sense. How, then do they work? They have been well described as bacteriostatic, i. e., as slowing up the vital processes of the bacteria. This they do by so interfering with their respiratory and digestive powers that the organisms either die of inanition or fall easy victims to the natural defences of the body. This is why the sulphonamides work better inside the body than outside it. It is as if by some means, a burglar could be paralysed during his marauding and held helplessly until the householder called in a policeman to make the final arrest.

From the original prontosil we have evolved very many new sulphonamides, all possessing the basically similar chemical linkage. Each tends to be particularly effective against a certain group of bacteria, but this is largely due to the fact that they dissolve to varying extents in the body fluids. Thus sulphathiazole, given by mouth, dissolves, and is absorbed so readily thus it is active against staphylococci anywhere in the body that the blood-stream carries it. On the other hand, sulphasuxidine is practically insoluble, and, because it reaches the large bowel unabsorbed, it is particularly useful in cleansing the colon and making operations in the region safer.

Blood Level must be maintained :

The drugs are used to deal either with a generalised septicaemia or pyaemia, or a local inflammation like osteomyelitis or pneumonia. It is nearly always necessary to achieve systematic diffusion throughout the blood-stream, through administration by mouth or by injection; in a few cases this is supplemented by local applications, and in still fewer cases the local use of the agent suffices. The efficiency of the drug at any site, whether bone, lung or other organ, depends, therefore, on how much is dissolved in the blood reaching the part, i. e., there is a certain concentration, or blood level, which must be reached if we are to tackle the infection properly. Now each time we give a couple of tablets by mouth, or a gramme by injection, the dose is fairly rapidly absorbed, and boosts