

produce most folding over of the parietal bones. I think Nature points the way. A breech birth is a normal birth; why try to avoid it?—I am, etc.,

Wallington, Aug. 14th.

A. Z. C. CRESSY.

DIET AND PUERPERAL SEPSIS.

SIR,—In the discussion of the problems connected with maternal mortality I have failed to notice what appears to me to be an extremely important possible cause of puerperal infection.

If underneath the room in the house or nursing home in which a pregnant woman was awaiting confinement there ran a leaking sewer, she, her nurse, and her accoucheur would all insist on her going elsewhere in view of the risk of infection.

In a high percentage of human beings under modern methods of dietary the lower alimentary canal is somewhat in the nature of a sewer. Examination of the faeces demonstrates that in a very considerable number of cases septic organisms are present in large numbers. What happens, therefore, is that delivery takes place very often in close proximity to a possible source of septic infection.

The mere giving of an enema or a series of purgative medicines has been shown to be of very little efficacy in reducing the septic condition of the alimentary canal, while antiseptic drugs have proved to be equally valueless. The wiser method of diminishing these organisms is by a sufficiently long course of dieting designed so that no food should be provided suitable for the organisms that we wish to get rid of.

Roughly speaking, the alimentary canal of a horse or a cow out on grass is free from dangerous micro-organisms, although the alimentary canal is considerably elongated in these animals. In carnivorous animals Nature gets over the difficulty of the dietary by extensively shortening the intestines. In the human animal, however, the intestine is similar in length and character to that of the frugivorous anthropoids. The lower intestine has a tendency, therefore, to become an infected sewer when constipation and flesh eating are associated.

The surgical method is to remove this piece of intestine. The more natural method is to use a dietary by which infection is avoided. In countries where coarse cereal foods and plenty of oil and salads are used the addition of a small amount of meat is unimportant, but in countries like England where most of the foods are ultra-refined, and where a high proportion of stall-fed fattened beasts' meat is eaten, constipation is very prevalent, and a septic condition of the lower intestine follows.

Dietary, therefore, in childbirth is a matter of supreme importance in the prevention of puerperal sepsis. Meat should be eliminated from it, salads and vegetables should be used largely, furrmetry and similar cereal dishes should replace the finer preparations of oat and wheat, oil and butter should find a considerable place, while the proteins should be obtained from cheese, milk, and nut foods during the whole period a mother is carrying her baby.—I am, etc.,

London, W.2, Aug. 13th.

JOSIAH OLDFIELD.

INSECT BITES AND RHEUMATISM.

SIR,—I am anxious to secure the co-operation of medical practitioners throughout the country in obtaining information regarding children who are badly bitten by insects at this time of the year.

I believe such children, especially those whose bites develop into sores, are the very ones who are predisposed to acute rheumatism and chorea. These children do not drink milk, either on account of poverty, or dislike, and unfortunately at the same time aggravate this lack of lime food by having a perverse appetite for acids like vinegar or lemons. The latter part of the summer is the time when the children are badly bitten by fleas, sand-fleas, harvest bugs, and midges, and it is within the next month the cases of acute rheumatism and carditis tend to show themselves.

It is interesting to note that the areas in which the human flea flourishes are coincident with those of acute

rheumatism, the tropics being free from both. One cannot help being struck by the fact of the periodicity in the viciousness of most of these insects, including fleas. Personally I feel convinced that the course of acute rheumatism is more that of a disease due to a protozoon than one due to cocci, and I have made the suggestion that the Aschoff bodies are probably the encysted forms of the protozoon responsible for acute rheumatism, though it is only fair to say that Professors Nuttall and Kettle are not prepared to accept my hypothesis.

I shall be very grateful to readers who will be so kind as to collect information for me on these lines and write to me on the subject.—I am, etc.,

61, Walter Road, Swansea,
Aug. 18th.

G. ARBOUR STEPHENS,
Consulting Cardiologist, King Edward
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SEA-SICKNESS.

SIR,—There has been considerable correspondence lately in the *Journal* on the subject of sea-sickness (June 23rd, p. 1089, etc.), and I am surprised that no one has mentioned the respiratory disturbance associated with this malady; I believe it is the most important factor in precipitating an attack.

Sea-sickness is largely a question of temperament, and those who are most prone to it belong to the nervous, or nervo-bilious type of constitution. It is people of this class who, under appropriate emotional excitement, give a "sigh of relief," a "gasp of astonishment," a "cry of joy," a "scream of terror," all of which are accompanied by abnormal respiration. Likewise, these people feel nausea from excitement, apprehension, suspense, or at horrifying sights; also, they hold the breath whilst running, or carrying heavy weights for a short distance. In all these instances, and I could mention many more, respiration does not flow in the usual rhythm. With people of this type altered respiration is one of the ways of giving expression to emotion. The nerve centres of vomiting and respiration lie close together in the medulla, and rapid respiration will relieve nausea, whereas it is aggravated by lessened and irregular breathing, thus showing the reaction of one centre upon the other.

When an individual of this type is going to cross the Channel it may be noticed that as the boat train approaches the harbour he tends to become silent, or to express anxiety as to the condition of the sea; he will become, possibly, a trifle pale and have an altered look in the eyes, and his respiration, if it could be measured, would show that it has lost its easy rhythm. It is little wonder that he ascends the gangway (perhaps with a heavy suitcase in his hand to accentuate respiratory trouble) with the nausea of apprehension and excitement at his epigastrium, and that with the first few pitches or rolls of the boat, with consequent "catchings of the breath," his collapse is complete. The nausea of apprehension has been converted by the respiratory trouble into active retching or vomiting.

Sea-sickness is a complex in which various other nerve centres become involved ultimately; thus, the frequent retchings cause the entrance of bile into the stomach and gastric hyperacidity, resulting in vertigo and depression of the general circulation with all their consequences. There is no need to lay too much stress upon the action of the vestibular centre, or upon altered blood circulation in the liver, as these are brought only into play after an attack of sickness has been excited. The vast majority of attacks commence before, or at latest as soon as, the ship starts to pitch and roll, and I have known of vomiting taking place before going on board. As one of your correspondents points out, sickness at sea and *mal-de-mer* are not necessarily the same thing, but the latter with all its graver symptoms is the follow-on of the former, if continued.

Proneness to the malady is, no doubt, a very variable quantity, but I am disposed to maintain that the onset of abnormal respiration is the determining factor. Persons endowed with sangfroid preserve normal respiration under all abnormal conditions, and so escape sea-sickness; and are pronounced good sailors. However, this gift occasionally