Health Act) in three cases, and inpatient treatment as a condition of a probation order in two cases. A "medical" disposal (including community care in one case) occurred in all the schizophrenic and subnormal patients. In contrast, three of the four patients in the manipulative group were given a prison sentence.

It is apparent from the criminal statistics that men commit child stealing offences nearly three times more often than women. Although there are no published reports about male child stealers, it appears that most of these cases concern men who abduct older children rather than babies and that at times a sexual motive may be involved. Some male child stealers are presumably suffering from severe mental disorder, as the criminal statistics show that they are not infrequently dealt with by the courts under Sections 60 and 65 of the Mental Health Act. Only one case of baby stealing from a pram by a man has come to attention. The patient was reported to be an epileptic with an immature personality. The offence seemed impulsive but unrelated to posticteric automatism. He was unable to give any explanation for his action and his motive remained obscure. Thus the nature of male child stealing offences, including the age of the victim and the presumed motivation, is probably entirely different from the baby stealing offences of women. It would be of interest to gather systematic data on male child stealers.

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Clinical Problems

Going Abroad

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Large numbers of people leave Britain each year for all parts of the world, for a variety of reasons and for varying lengths of stay. Often they seek advice on what they should do to comply with health regulations and to prevent ill health while they are away.

Travellers overseas may encounter diseases which are absent from Britain or less common here than in countries which they may visit; they will want to be protected from such illnesses as far as is possible. These will, of course, vary from country to country and will also depend on the circumstances under which the traveller lives and the duration of his stay. Thus the risks are quite different in a rural area of Africa, a congested city in the Orient, a desert area in the Middle East, and a crowded holiday resort in Europe; they are different if the journey is made overland to Nepal and sleeping in a tent or by fast aircraft to an air-conditioned hotel in Tokyo or Rio de Janeiro.

Protection against illness may be affected by: (1) avoidance of infection, as by the use of a mosquito net or boiling drinking water; or (2) combating acquired infection by immunization or suppression.

Malaria

Malaria has been eradicated from large areas of the world but there are still many parts of the world, especially in Africa, where it remains. Prophylaxis, meaning protection from infection, cannot be achieved because there is no non-toxic drug capable of destroying sporozoites, the infective form of the parasite injected by the biting mosquito; protection therefore depends on causal prophylaxis and suppression. There are drugs available which destroy the pre-erythrocytic form of *Plasmodium falciparum*, the species of parasite responsible for malignant tertian malaria, infection with which may kill; they therefore destroy the source of the blood forms giving rise to the clinical attack and are referred to as "causal prophylactics"; proguanil (Paludrine) and pyrimethamine (Daraprim) are such drugs. Schizonticides are those compounds having an effect on the asexual forms of the parasite developing within the red cells, and regular treatment with such drugs may keep the level of infection in the blood below that at which clinical manifestations are present; they are known as "suppressives" and include proguanil and pyrimethamine and the more powerful schizonticides, quinine, nivaquine and chloroquine, camoquine and mepacrine.

Persons returning to Britain from malarious areas frequently give a history of malaria while on suppressive drug treatment. So often a blood film was not taken at the time of the febrile attack so that the diagnosis may be in question. Even if parasites are seen in the film it is possible that suppressives were not taken regularly; finally possibly the parasite is truly resistant to the blood concentration of drug resulting from the particular suppressive regimen.

RESISTANT PARASITES

Undoubtedly in some parts of the world *P. falciparum* parasites are resistant to blood levels of drug produced by standard courses of treatment; this is a quantitative phenomenon rather

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than an all-or-nothing one, so that increased dosage may be successful. Since nivaquine (or chloroquine, which is merely a different salt) is the most powerful schizonticide available it is advisable to reserve this drug for the treatment of an acute attack of malaria. Proguanil and pyrimethamine therefore remain the drugs of choice for suppression. For an adult, doses of 100 mg daily or 25 mg weekly, respectively, are the standard regimen (children should be given a proportionate dose, while syrup is available for very small children). Suppression should be started on arrival in a malarious area, continued for the whole of the stay without fail, and last for four weeks after leaving the endemic region.

MOSQUITO REPELLANTS

Protection against mosquito bites is afforded by netting over windows and doors, provided it is intact; so often, however, this is not the case and probably mosquito nets over beds is the better method—even a still night under a net in humid West Africa is not unbearable. The best repellent which is effective for some hours against mosquitoes and other insects is dimethylphthalate, an oily liquid which is not unpleasant to apply, is inexpensive, and makes an evening on a verandah even more enjoyable.

Smallpox

Though control of smallpox is being actively carried out in parts of the tropics, the disease is still endemic in some African countries, Brazil, India, and Indonesia—where the incidence may be greater than 5 cases per 100,000 population per annum. Recent vaccination against smallpox gives appreciable protection; nevertheless, there are risks associated with the procedure so that the principle should be applied intelligently and the danger of smallpox weighed against that of vaccination.

Ill effects are seen especially in the young, in whom the incidence of severe nervous system and skin complications is greater than in older persons. Encephalomyelitis occurs in about 15 of every million children vaccinated during the first year of life and carries a 40% mortality with the possibility of permanent disability in those who survive. During the second year of life the incidence falls to 3 per million, still with high mortality; thereafter the incidence rises again but with no mortality.[1]

SKIN COMPLICATIONS OF VACCINATION

The important skin complication is eczema vaccinatum—a vesicular eruption at the site of skin lesions in a patient with existing eczema. Though occurring at all ages, it is especially important under the age of 1 year because of the high mortality at that time. An unvaccinated child with infantile eczema may also develop this complication merely by contact with a person who had been recently vaccinated against smallpox.

These observations suggest that smallpox vaccination should be carried out during the second year of life; in healthy children travelling to areas where smallpox is endemic, vaccination may be carried out between the ages of 6 and 12 months. If travelling to areas where smallpox is not endemic this should be delayed and a certificate issued giving the reason. Vaccination should not be undertaken before the age of 6 months; the response tends to be less good at this time.

Existing eczema is an absolute contraindication, especially in a small child; if there is a recent history of such skin lesions and vaccination is urgent, as in those in contact with the disease, it may be carried out and antivaccinial gammaglobulin given at the same time. Vaccination is also contraindicated during pregnancy because of the risk of fetal death from generalized vaccinia; the only possible circumstance under which this might be relaxed is close contact with a smallpox patient. In those whose immune response is less good than normal vaccination may be followed by a progressive ulceration at the site of scarification; this may be seen in patients suffering from agammaglobulinaemia and in those on steroid therapy. Again, if vaccination is thought to be essential it should be accompanied by antivaccinial gammaglobulin.

In 1970 smallpox was reported by only 21 countries, as compared with 42 countries in 1967;[2] it is expected that this number will fall still further so that fewer and fewer travellers will need to be vaccinated against smallpox.

Enteric Fever

Typhoid fever is unusual in Britain and at least half of the 200 or so cases seen here each year is in persons recently arrived from warmer climates where such infections are much more common. "Enteric fever" covers all salmonella septicaemias and may therefore be due to *Salmonella typhi*, *S. paratyphi*, or one of the many salmonella organisms aquired from animals and more often giving rise to food poisoning. All salmonellae other than *S. typhi* tend to produce a diarrhoeic illness which may be associated with constitutional upset; blood culture may be positive for the particular organism in these patients.

It is therefore advisable for travellers overseas to be protected so far as is possible from such infections. Infection is via the intestinal tract, water and food being the mode of transmission. Care in the boiling of water, the preparation of ice from boiled water, the proper cooking of food, and the disinfection of vegetables to be eaten raw, provide considerable protection. Enthusiasm for such measures tends to wane even in persons in their own quarters and is often nonexistent in hotels and restaurants.

IMMUNIZATION

The other protective measure is immunization, first introduced by Pfeiffer and Kolle[3] and by Wright[4] in 1896. This appeared to be of benefit though it was not properly tested until comparatively recently. It is difficult to believe that typhoid immunization was not of value under the appalling conditions in the trenches in the first world war, and the difference in incidence of enteric infections between British and Italian troops and the effect of adequate vaccination in the latter in North Africa during the Second World War, are strongly suggestive of protection conferred by inoculation.[5]

Only during the past few years has the value of vaccine been shown; well-designed experiments carried out in Yugoslavia,[6–8] in British Guiana,[9] and in Poland[10] have shown that the attack rate of typhoid fever diagnosed by blood culture positive for *S. typhi* was lower in those vaccinated than in controls. Different vaccine preparations have seemed better than others in the different trials; formol-killed, phenol-preserved vaccine is probably as good as any other, two injections of 0·5 ml ($1·0 \times 10^9$ organisms per ml) subcutaneously at a four-week interval giving considerable protection for two years; that protection is not complete is shown by the fact that some inoculated persons did develop culture-positive typhiod fever. There is some evidence that intradermal inoculation, in which the dose is 0·1 ml rather than 0·5 ml, is followed by fewer general and local reactions[11]; the antibody response after immunization by this route is as good as that after subcutaneous injection. Alcoholized vaccine may not be given intradermally.

Vaccines available in this country are either monovalent (*S. typhi* only) or contain *S. typhi* ($1·0 \times 10^9$ organisms per ml) and *S. paratyphi A* and *B* ($0·5 \times 10^9$ organisms per ml) and may or may not be combined with tetanus toxoid. The value of including *S. paratyphi* in the vaccine has not been proved and

it has been suggested that these organisms contribute to side effects. Current practice is to give 0·5 ml subcutaneously followed by 1 ml four weeks later or as long afterwards as is possible; booster doses of 0·5 ml are given at yearly or two-yearly intervals thereafter, though the optimum follow-up regimen has not yet been determined by clinical trial. Using the intradermal route all doses are 0·1 ml. Enteric fever is relatively uncommon in the very young so that immunization need not be carried out under the age of 1 year; inoculation carries no risk to the fetus but because of the occurrence of side effects it is perhaps better avoided during pregnancy if possible. Side effects are usually not appreciable—some local soreness with malaise, low fever, and mild constitutional upset during the 24 hours after injection.

Cholera

Since the pandemics of cholera which occurred from the early 1800s until the beginning of this century, the disease has remained confined to the Far East, Bengal being its home—that is, until recently, when it has spread to the Middle East, Africa, and Europe. Originally the responsible organism was the classical *Vibrio cholerae*; during the past 10 years its biotype *V. cholerae El Tor* has steadily ousted it so that the latter organism is now primarily responsible for infections throughout the world. It was originally thought that *V. cholerae El Tor* was less pathogenic but this is now known not to be true, the clinical course being indistinguishable from that produced by the classical vibrio. In addition it seems that the *El Tor* infection perhaps affects younger children and that the carrier state may be longer.

MODE OF TRANSMISSION

The portal of entry is the intestinal tract, water being the important mode of transmission; the source of the infection is man only and the susceptible recipient is anyone not well protected. Protection may be provided by immunization but there is some evidence that repeated contact with the organism in endemic areas provides some degree of naturally acquired immunity; this is to some extent supported by studies on vibriocidal antibody in such areas.[12] This naturally acquired immunity may have played some part in preventing a catastrophic epidemic in Calcutta and neighbouring areas during the disasters in the summer of 1971; the circumstances—refugees living under appalling conditions of sanitation and overcrowding, the presence of a substantial number of cases of cholera, and the rain starting—seemed just those required to produce a devastating epidemic, but this did not occur.

Inoculation against cholera is not efficient, providing partial protection for perhaps three or four months; the killed vaccine currently employed in Britain contains $8{\cdot}0 \times 10^9$ organisms per ml of the Inaba and Ogawa strains, doses of 0·5 and 1·0 ml being given subcutaneously at a four-week interval. Vaccines made from *El Tor* organisms are in use in some countries and might be expected to be more effective in the face of this infection than vaccines made from the classical vibrio. Cholera vaccination is seldom followed by side effects; it need not be given to very small children.

Vaccination should not be allowed to give a false sense of security; it is no substitute for good hygiene practice. The boiling of all water, the proper cooking of vegetables, and in an endemic area perhaps the avoidance of raw vegetables, are of the greatest importance. One wonders too whether the time, money, and effort expended in mass vaccination of a population probably partially protected by repeated natural infections would not be better employed in the emergency provision of clean water and efficient disposal of excreta. However, the traveller leaving this country for anywhere overseas at this time would be advised to be inoculated whether this is required by regulation or not.

Yellow Fever

Though causing a large number of deaths in the past in the "white man's grave" of West Africa and in Panama, and though there are occasional epidemics today, yellow fever would seem to be a relatively unimportant disease at the present time. How much of this reduction in incidence is attributable to man's efforts and how much for other reasons is difficult to say. The infection is transmitted by the mosquito *Aedes aegypti*, so that measures directed against these insects are important and the remarks made regarding personal protection against the bites of malaria-transmitting anopheline mosquitoes are valid here also. Man is not the only source of infection to mosquitoes, monkeys constituting an important reservoir. The susceptible recipient is anyone not protected; clearly natural immunity or naturally acquired immunity is of importance in endemic areas because subclinical infections, as gauged by the mouse protection test, are common.

Artificially induced immunity using the 17D virus is extremely efficient, giving solid protection for at least 10 years.[8]

It is given as a single dose of 0·5 ml subcutaneously, and by international regulation is valid as from 10 days following a primary inoculation or immediately after a revaccination within 10 years of the previous immunization. The procedure is complicated by no side effects; it should not be carried out within three weeks of a primary smallpox vaccination or within four days of a revaccination; the reverse, however, does not obtain—smallpox vaccination may follow yellow fever inoculation without such an interval and in fact in the past the practice in some West African countries was to give the two together. Yellow fever immunization need not be carried out in children under the age of 9 months. The preparation is available only at certain centres because it must be used within 30 minutes of exposure to room temperature.

Poliomyelitis

Poliomyelitis is common in tropical countries and conforms more to "infantile paralysis" than it has done in this country of recent years. Most children going overseas from Britain will have been given poliomyelitis vaccine, as will some adults also; if required, it is given orally in a dose of three drops at monthly intervals for three doses.

Tetanus

Tetanus is also much more common in warm climates than in the United Kingdom; again, most children leaving this country will have been given triple vaccine (diptheria, whooping cough, and tetanus), and adults—especially those going to work in rural areas—should be advised to be inoculated or reinoculated with tetanus toxoid. In fact tetanus is probably extremely uncommon wherever immunization has been carried out, no matter how long ago. Primary inoculation of adults or older children consists of two doses of toxiod at a four to six week interval followed by a third dose six months later; booster doses consist of a single injection.

Viral Hepatitis

There is evidence that the administration of gammaglobulin, even in the face of an existing epidemic, affords protection against a clinical attack of viral hepatitis. Its effect, which is that of passive immunity, is however short-lived extending for perhaps two or three months only. There is the suggestion that under cover of such passive protection naturally acquired immunity may develop in a subclinical attack and that this is more likely if two doses of gammaglobulin are given at a six-month interval. Viral hepatitis is extremely common in tropical countries at present and is certainly one of the hazards of a

visit overseas; gammaglobulin is given at the rate of 0·2-0·4 ml/kg body weight, corresponding to about 0·5 g and should be given shortly before leaving this country to those requiring it. Who such persons should be is difficult to say; often it is the traveller who requests it.

Schedule for Travel Overseas

To comply with these recommendations for immunization is clearly a formidable procedure and if only because of the time available the schedule must often be altered. A convenient basic course is one modified from that suggested by Roodyn,[13] and set out in the Table; it may be adjusted or supplemented by poliomyelitis or tetanus immunization to meet the requirements of the individual, which will vary depending on the time available, the region to be visited, and previous inoculations.

Basic Immunization Schedule for Overseas Travel

Attendance	Immunization	Dose
First	Monovalent typhoid vaccine	0·1 ml intradermally
	Cholera vaccine	0·5 ml subcutaneously
	Yellow fever vaccine	0·5 ml subcutaneously
Second (four weeks after first)	Typhoid vaccine	0·1 ml intradermally
	Cholera vaccine	1·0 ml subcutaneously
	Smallpox vaccine	single scarification
Third (just before departure) ..	Gammaglobulin	0·2-0·4 ml/kg intramuscularly

Miscellaneous Disorders

Persons visiting warm climates not infrequently suffer from skin disorders, of which the commonest are insect bites, prickly heat, and fungus infections.

Most people experience discomfort at the site of mosquito, sandfly, or other insect bites; in some, however, the reaction is more violent with considerable extension of the original lesion. An antihistamine cream may give some relief; the value of dimethylphthalate as an insect repellent has already been mentioned. Prickly heat is especially seen in the humid parts of the tropics and may be very uncomfortable affecting all ages, including babies; it is not painful and does not itch—it "pricks," as its name describes. Astringent lotions, of which 1:1,000 mercury perchloride is a very cheap example, give some relief. Fungus infections again are especially common in the warm, damp parts of the world, the lesions being found in the warm moist parts of the body—the crutch, groins, axillae, and feet; the old remedy, Whitfield's ointment (compound benzoic acid ointment) is quite as effective as the more recent preparations and much cheaper. Personal hygiene and attempts to keep affected parts dry by, for example, frequent changes of socks into which talcum powder has been sprinkled, also help; no socks at all is even better.

Diarrhoea greatly troubles many people visiting tropical or even other temperate countries, the reasons for this being poorly understood. Equally inexplicable is the apparent relief afforded by Enterovioform (iodochlorhydroxyquinoline) which seems to "keep going" so many travellers on such visits. Some people go further and take with them sulphonamide preparations or a tetracycline. Enterovioform and sulphaguanidine are very unlikely to do harm and are to be valued if they make a stay overseas more enjoyable, but the use of tetracycline should be discouraged.

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Today's Drugs

With the help of expert contributors we print in this section notes on drugs in common use

Lipid Lowering Agents

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A rise in the serum levels of lipids is associated with increased risk of atherosclerotic vascular disease. There is little evidence that manipulation of serum lipid levels into the normal range prevents the development of ischaemic heart disease or other vascular disease in otherwise healthy individuals. It has recently been suggested that administration of clofibrate to patients with established ischaemic heart disease results in a significant decrease in mortality, especially a decrease in sudden deaths, but whether this is due to a decrease in serum lipids, or to some other action of the drug, is not clear.

General Management of Hyperlipidaemia

Before embarking on drug therapy for hyperlipidaemia it is important that the serum cholesterol, triglyceride, and lipoprotein pattern be defined, since different therapy is appropriate for different patterns of lipid disorder. Secondary causes of hyperlipidaemia such as diabetes and hypothyroidism should be sought and appropriate treatment given.

DIET

The first step in the management of a patient with hyperlipidaemia is a consideration of his diet. Many patients are overweight and weight reduction may lead to a fall in serum