

## THE MEDICAL ASPECTS OF A SMALL HIMALAYAN EXPEDITION

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There was no medically qualified man among the five members of the Oxford University Exploration Club's Expedition, which was engaged in field work in Tehri-Garhwal from August to November of 1952. Two members, however, had received instruction in the use of our First Aid equipment. The materials taken were designed to deal with all minor accidents and illnesses within the party, as well as with various more serious conditions which might be encountered. It was essential to keep our permanent porters (four Sherpas and five local coolies) in good condition, and on some occasions we had about twenty additional coolies to look after. Paul Borup, the anthropologist, used a considerable quantity of our medical stores in treating the inhabitants of the hill villages where we stayed. All but one of the villages through which we passed after leaving the road were devoid of dispensaries or medically trained persons. Our efforts to cure the sick in these places were greatly appreciated by the inhabitants, who had, indeed, much more confidence in our ability to heal them than was justified by our qualifications.

The only people who ever try to help the sick in these parts are the Swamis. These are Hindu holy men who have renounced worldly things; they are easily recognised by their simple orange-coloured dress. They pass through the villages during their travels and do their best to help the sick and injured by prescribing herbs, by sometimes giving homeopathic medicines, and—last but not least—by giving advice. The local peoples have great faith in these Holy Men, who occasionally appear to effect miraculous cures. One Swami in particular, Swami Neelananda, of the Rama Krishna Mission, had a special regard for Western medicine. Such help as we gave him was fully repaid by his services to us throughout the expedition. But he always liked *us* to diagnose, prescribe, and provide the medicine for the case in hand, and to let *him* give the patient the medicine with *his* blessing!

Our Expedition, at one stage, was about 160 miles from the nearest road, so that it was impossible to augment supplies in the field. We limited the weight of the medical kit to 50-lbs., because of the high cost of mule transport and porters, and had great difficulty in deciding what was best to bring. Little information is available on what is desirable and what is unnecessary. Only one

previous expedition appears to have published its medical supply list (W. H. Murray, THE SCOTTISH HIMALAYAN EXPEDITION, London, 1951), and this was used as a rough basis in planning our requirements. A complete list of what we took is given in the Table, together with the quantities used during the first six weeks in the field. The detail of quantities used during the whole Expedition is not available, as a list was not made of the unused materials before their presentation to the Rana Krishna Mission Hospital; general remarks on this can, however, be made.

TABLE

Material Brought.	Original Quantity.	Amount used in first six weeks in the field.
Paludrine Tablets, 0.1-g. ... ..	1000	400
Sulphamezathine, 0.5-g. ... ..	500	100
Sulphaguanidine, 0.5-g. ... ..	500	200
Aspirin, 5-grains ... ..	500	150
Aspirin-codeine ... ..	500	250
Castor oil capsules ... ..	100	0
Bismuth Salicylate, 5-grain ... ..	500	300
Proflavine throat tablets ... ..	100	0
Dovers pills ... ..	50	0
Soneryl tablets ... ..	25	0
Glycerine of Thymol throat tablets ... ..	8-oz.	4-oz.
Glycerine and blackcurrant pastilles ... ..	8-oz.	5-oz.
Chlorodyne ... ..	3-oz.	0
Ear drops ... ..	0.5-oz.	0
Zinc sulphate and adrenalin eye drops ... ..	0.5-oz.	0
Vaseline ... ..	4-oz.	0.5-oz.
Mandl's paint ... ..	1-oz.	0
Iodine solution ... ..	16-oz.	6-oz.
Iodine pencils ... ..	12	10
Whitfield's ointment ... ..	2-oz.	0
Castilani's paint ... ..	1-oz.	0
Sulphacetamide ointment ... ..	1-oz.	0.25-oz.
Potassium permanganate ... ..	4-oz.	0
D.D.T. with pyrethrum ... ..	4 tubes	2-3 tubes
Cascara tablets ... ..	100	0
Dettol ... ..	8-oz.	4-oz.
C.T.A.B. ... ..	2-oz.	0.5-oz.
Bismuth Formic Iodide powder ... ..	21-g.	c. 15-g.
Surgical spirit ... ..	8-oz.	3-oz.
Morphia, Cocaine lamellae, and Snake Bite serum (dried) were obtained in India.		
Lip pomade ... ..	12 tubes	7 tubes
Sun protection cream, containing titanium dioxide ... ..	100 tubes	18 tubes
Sun protection cream ... ..	100 tubes	24 tubes
"Mylol" insect repellent ... ..	3 bottles	0
Vitamin C, 0.5-g. tablets ... ..	500	50
Vitamin B complex tablets ... ..	500	25
Triangular bandages ... ..	3	0
Oiled silk ... ..	0.5-yard	0

Tule gras ... ..	1-oz.	0
Plaster of paris bandages, 4-in. ... ..	2	0
Clinical thermometers ... ..	3	1 broken
Scalpel ... ..	1	—
Scissors ... ..	2	—
Forceps large ... ..	1	—
Spencer-Wells forceps ... ..	3	—
Forceps small ... ..	1	—
Hypodermic syringes, 10-c.c., 2-c.c., and 1-c.c.	3	—
Needles for the syringes ... ..	9	—
Suture needles ... ..	3	—
Tubes of gut ... ..	3	0
Dental forceps ... ..	6	—
Cartridge syringe ... ..	1	—
Needles for syringe ... ..	12	0
Cartridges of local anaesthetic ... ..	20	0
Dental mirrors ... ..	2	—
Carbolised resin ... ..	1-oz.	0
Ethyl chloride ... ..	100-g.	0
Penicillin, for injection, 1.0 million units ...	6	0
Penicillin, for injection, 0.5 million units ...	6	0
Penicillin throat lozenges ... ..	40	0
Penicillin ointment ... ..	2-oz.	2-oz.
Ampoules sterile water, 10-c.c. ... ..	10	0
Aureomycin tablets, 0.5-g. ... ..	32	0
Aureomycin ointment ... ..	6-oz.	1.5-oz.
Aureomycin eye ointment ... ..	3 tubes	0.25 tube
Chloromycetin tablets, 0.25-g. ... ..	200	0
Gauze ... ..	12 yards	2 yards
Cotton wool ... ..	12-oz.	7-oz.
Crepe bandages, 3-in. ... ..	6	0
Crepe bandages, 2.5-in. ... ..	3	0
Boric lint ... ..	6-oz.	2-oz.
Elastic adhesive bandages, 3-in. x 3-in. ...	4	1
Elastoplast bandage ... ..	6 yards	4.5 yards
Bandages, 2.5-in. ... ..	36	c. 9
Zinc Oxide plaster ... ..	6 yards	2 yards

The Expedition suffered little from minor ailments. We all took "paludrine" daily in the foot hills where there was a certain amount of malaria. Only one member of the party got dysentery, a mild attack, which responded rapidly to sulphaguandine. Great care was taken that the drinking water supplies were either boiled, or did not come from villages or irrigation channels. There was plenty of "good" water available in August at the end of the monsoon season, but on our return it was scarce. On one occasion we were forced to use surface water from a field in which cattle roamed; this was well boiled and apparently caused no ill effects. All members of the party at times suffered from severe indigestion caused by local foods (largely rice). By far the most effective remedy for this was bismuth salicylate (20-40 grains),

which was also very good for high altitude digestive troubles. Aspirin-codeine tablets gave much relief from high altitude headache, while aspirin alone had little effect.

The bismuth-formic-iodide powder was excellent for minor abrasions, etc., and appeared to promote very rapid healing. It was in great demand and we wished we had brought more. We occasionally mixed it with our ordinary sun protection cream to give an ointment. "Elastoplast" was extremely valuable; we did not have enough and had to use our supply sparingly. The porters often used no footwear while carrying their 68/80-lb. loads and many cut feet were the result. More cotton wool would also have been welcome.

The penicillin ointment lost its potency under field conditions at an early stage and was not worth bringing. The aureomycin ointment, however, retained its activity throughout the Expedition. It proved very useful in the treatment of septic wounds, dealt with by the local people by the application of cow-dung. The aureomycin eye ointment was only used once, when it cleared up a septic eye in a mule.

D.D.T. with *pyrethrum* gave great comfort at night when we slept in "dharamsalas," or village rest houses. These places were invariably flea-ridden, but it was possible to sleep comfortably after dusting oneself and sleeping bag with this powder; the uninvited bed-fellows rapidly became extinct.

A few teeth were successfully extracted from the villagers, who did not approve of the use of local anaesthetics.

The Vitamin B and C tablets proved unnecessary, as we were lucky enough to obtain frequent supplies of fresh meat and vegetables. The insect repellent was also not required.

The sun protection creams, specially prepared for the Expedition by Crookes Laboratories Ltd., were of great value. The ordinary cream which contained a colourless substance absorbing ultra-violet radiation worked well at low altitudes. At high altitudes and on snow the titanium dioxide cream was unreservedly excellent. It was very efficient, none of the party using it were affected by the intense sunlight while travelling over snow above 21,000 feet. Its covering power was much higher than that of the normal zinc oxide creams and it did not rub off so easily.

It is very important to pack all medical equipment for a Himalayan Expedition so that it can stand short periods of total immersion and some very rough handling. As far as possible we replaced glass bottles by plastic ones, and all pills, etc., were packed in metal "M. and B." tins fitted with rubber washer seals. The bandages and dressings, etc., were packed in canteen size cocoa tins. All packages had contents labels on the *inside* as well as on the outside. This saved a great deal of trouble, as many of the external labels came off.

On behalf of the Oxford University Exploration Club's Expedition to Tehri-Garhwal (1952), I should like to thank all those who so kindly helped us to design the medical kit, and the following firms for valuable advice and most generous gifts of their products: C. L. Bencard Ltd., Boots Pure Drug Co. Ltd., Claudius Ash, Sons & Co. Ltd., Crookes Laboratories Ltd., Imperial Chemical Industries (Dyestuffs) Ltd., Lederle Laboratories Division of Cyanamid Products Ltd., Parke Davis & Co. Ltd., Philip Harris Ltd., of Birmingham, and Roche Products Ltd.