

Cover Story

Although the results of Indian cosmonaut Rakesh Sharma's yoga experiments are yet to be fully analysed, yoga has already proved to be highly beneficial for high altitude expeditions. For example it can help counter



vertigo: a self-simulated sensation of fear and dizziness at high altitude.

To help overcome the physiological and psychological disturbance vertigo creates

YOGA AND SCIENCE HELP MOUNTAINEERS

a one-month yoga training was recently arranged for lady mountaineers at Delhi's Vishwayatan Yogashram. Pranayama, servanga asana, garur asana, sirsasana have been recommended for the expedition members.

Clinical studies conducted at the Defence Institute of Physiological and Allied Sciences (DIPAS) have proved that yoga increases muscular effi-

ciency. A yoga practitioner "develops some degree of resistance against physical and environmental stress which is evidenced from the relative stability of mental fatigability in-

dex during stress," says one of the DIPAS studies.

Bharati Dass, who had scaled 25,447-feet Kamet, and its satellite mountains Abigamin, Nanda Devi etc, says that yoga has improved her concentration at high altitude minimising chance of accident.

It has already been medically established that yoga improves physiological and biochemical functions. It has been found that

yoga training for military personnel posted at high altitude areas has been found useful. Results speak: "The magnitude of cold-induced vascular constriction is less after practising yoga." A good yoga expert can voluntarily reduce oxygen utilisation and can control pulse through respiratory manoeuvres.

While the traditional yoga has been found useful for mountaineers, modern technology has also come to their aid. In the last few years the personal gear and equipment of mountaineers have become light as well as more efficient. Some items which were weighting about 10-13 kgs in the 50s now weigh only 5 kgs. The canvas ruck-sack of 1953 is replaced by nylon one, and the Koflatch double boots have displaced heavy leather ones of the 50s.

These new boots have layers of a special material which reduce the intensity of cold and frost-bites. Rubber air mattresses have been discarded in favour of carry-mat weighing around 250 grams. Fibreglass has replaced wooden handle of the ice axe.

Nylon ropes have become further lighter. The allow knuckle and spiks on tents have been replaced with light flexible plastic. The Biboaca tents now used are very light and can accommodate two persons. Cumbersome oxygen cylinders and masks have been replaced by smaller and lighter ones.

To reduce health hazards like dehydration, diarrhoea etc. the Defence Food Research Institute has created hygienic soups, juices, tea, coffee, tin-foods etc.

—Gautam Chattopadhyay

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